Case and case alignment in the Greater Hindukush

An areal-typological survey

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Abstract

This thesis concerns languages in the Greater Hindukush, the area in northern Afghanistan and Pakistan, where a total of about 50 languages are spoken. The thesis' topic is case systems and case alignment systems of nouns in an areal-typological perspective. This is investigated by using a representative sample.

The grammatical relations of S, A and P, and the cases marking these, are investigated. The three attested alignment systems are accusative, ergative and split, and are clearly geographically distributed, which indicates that their status is areal-typological. Based on the sample, there seems to be a tendency for the languages in the Greater Hindukush to exhibit split alignment systems built on tense-aspect. Most languages employ accusative alignment in imperfective, and ergative alignment in perfective tense-aspects.

A comparison with a worldwide sample (WALS) is only partly possible, as this sample uses more categories than accusative, ergative and split, but the present sample supports the results in those categories which can be compared.

A predominant pattern in core case syncretism is observed, with an opposition of the nominative singular versus the nominative plural and the oblique in both numbers.

Keywords

Case, case alignment, grammatical relations, Hindukush, areal typology, Indo-Iranian, Tibeto-Burman, Burushaski, Turkic

Sammanfattning

Denna uppsats behandlar språk i Hindukush i norra Afghanistan och Pakistan, där sammanlagt ca 50 språk talas. Ämnet för studien är kasussystem och kasusmarkeringssystem vid substantiv ur ett arealtypologiskt perspektiv, vilket undersöks utifrån grammatikor i ett representativt urval av språken.

De grammatiska relationerna mellan S, A och P och de kasus som markerar dessa undersöks. Belagda kasusmarkeringssystem är ackusativ- och ergativsystem samt kluvet system. Systemen uppvisar en distinkt geografisk distribution, vilket antyder att kasusmarkeringssystemen är ett arealtypologiskt drag. Vidare pekar resultaten på ett kluvet system baserat på klyvning i tempus-aspekt som det dominerande kasusmarkeringssystemet i Hindukush. De flesta av språken använder ett ackusativt kasusmarkeringssystem i imperfektiva, och ett ergativt kasusmarkeringssystem i perfektiva tempus-aspekt.

En jämförelse med ett globalt sampel (WALS) är bara till viss del möjlig, eftersom studien i WALS använder fler kategorier än ackusativa, ergativa och kluvna system, men den här studien bekräftar resultaten i de kategorier som kan jämföras.

Ett dominerande mönster för kärnkasussynkretism kan observeras, med sammanfall av nominativ plural och oblik i båda numerus.

Nyckelord

Kasus, kasusmarkeringssystem, grammatiska relationer, Hindukush, areal typologi, indo-iranska, tibetoburmanska, burushaski, turkspråk

Abbreviations

A	the agent-like argument of a transitive predicate
ABL	Ablative
AblSup	Ablative-Superessive
ABS	Absolutive
ACC	Accusative
AG	Agentive
AG-Impf	Agentive-Imperfective
AG-Perf	Agentive-Perfective
COM	Comitative
DAT	Dative
DIR	Direct
ERG	Ergative
F	Feminine
fut	future
GEN	Genitive
GHK	Greater Hindukush
HKIA	Hindukush Indo-Aryan
IA	Indo-Aryan
ILL	Illative
INESS	Inessive
INSTR	Instrumental
LOC	Locative
M	Masculine
NOM	Nominative
OBJ	Objective
OBL	Oblique
P	the patient-like argument of a transitive predicate
PL	Plural
POSS	Possessive
PP	Postposition
S	the argument of an intransitive predicate
Σ	Sum
SG	Singular
SOC	Sociative
TEMP	Temporalis
2pl	second person plural

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1. Introduction

The Greater Hindukush (GHK) is the mountainous region in the north of Pakistan and Afghanistan, bordering Tajikistan in the north, and India and China in the east. It is an area with great linguistic diversity. The languages spoken in the area belong mainly to the Indo-Iranian language family, to Indo-Aryan, Iranian and Nuristani languages. In this area Tibeto-Burman and Turkic languages are also attested, as is the language isolate Burushaski.

A thorough typological study of the languages spoken in the area has not yet been carried out.[1] In this study, I will investigate the case systems, and case alignment systems and patterns, in a representative sample of the region's languages. The focus will be on case marking in full noun phrases; that is, the grammatical relations of S, A and P, and their respective marking.

The following research questions are considered in this thesis:

(1) Is there morphological case marking on nouns in the sample languages? By what means are the cases marked? How many, and which, cases can be attested? Does case syncretism occur? Does the system show asymmetrical case marking? Is there anything that makes describing the case systems in the sample problematic?

(2) Which alignment systems are found in the sample? Which core cases do the languages use? What are the grammatical relations of S, A and P? Can we observe any areal-typological patterns in the GHK? Is there a tendency towards a certain type of alignment? Do the alignment systems differ from the typical alignment systems in their respective language families?

The features listed in (1) are chosen with regard to the features represented in the (online) World Atlas of Language Structures, WALS. I do not intend to discuss specific case forms and paradigms in detail for each language here, but an exemplary paradigm, of mostly just case endings, might be given, as this helps to illustrate the features.

The investigation for (2) is limited to the morphological alignment pattern of full noun phrases. Other categories that mark dependency and grammatical relations, e.g. pronouns, or syntactical case marking, will not be included.

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[1] See the project "Language contact and relatedness in the Hindukush Region", a research project supported by the Swedish Research Council (421-2014-631).

1.1 Purpose

This thesis has two closely connected purposes: to create a typological overview of the case systems in the languages in the Greater Hindukush, and to contribute to a better understanding of the languages' mutual relations.

Results from the typological survey of case properties of will be compared with each other and with the results in a world-wide sample (WALS). Results from the investigation of alignment systems are likewise compared with a world-wide sample, with each other and with the typical structure of alignment in the relevant language family. Finally, the geographical distribution of the alignment systems within the area is investigated, in order to enable a discussion about areal-typological significance.

2. Background

Necessary for this thesis is the understanding of three background areas: first, the general properties [of the category] of case, and the different case alignment patterns; second, the linguistic situation of the Greater Hindukush and its typologically interesting status; third, the theories and principles of areal typology.

2.1 Case

This first section will deal with case and case alignment. It will define and present the range of typological features of case that are investigated in the sample languages. These features, chosen with respect to the features presented in WALS, will be used to compare the languages to each other and to a greater sample. Subsequently, case alignment, and the different alignment systems, such as the accusative, ergative etc., and the notion of split systems, will be presented.

2.1.1 Definition

In this thesis, I will work with Blake's definition and terminology about case. Case is:

> "[...] a system of marking dependent nouns for the type of relationship they bear to their heads. Traditionally the term refers to inflectional marking, and, typically, case marks the relationship of a noun to a verb at the clause level or of a noun to a preposition, postposition or another noun at the phrase level." (Blake 2001:1)

I define *marking* more specifically as morphological marking. Of particular relevance for this study are the core grammatical relations of a language, i.e. the grammatical relations of S, A and P (see 2.1.3). They are marked by so-called core cases (see Blake 2001:198).

Non-core cases are also considered in this thesis, although less exhaustively. These cases are also referred to as "peripheral" (Blake 2001:203).

Case relations are the "morphosyntactically determined relations borne by dependents (an "optional member" in a construction) to their heads (the "obligatory member" in a construction) (Blake 2001:201). They describe the "purely syntactic relations such as subject, direct object and indirect object, [...] and they also refer directly to semantic roles such as source and location" (Blake 2001:3).

Case suffix or postposition?

A problematic issue in the description of a case system is the analysis of affixes (in the sample: suffixes) and adpositions (in the sample: postpositions). Affixes can be defined by their phonological status; as a grammatical morpheme, they are phonologically bound to a stem (Dryer 2013). Postpositions are unbound grammatical morphemes. Often, case relations (e.g. for locative cases) are expressed by postpostions, which may or may not be suffixed. It is not always easy to tell if a certain grammatical marker should be analysed as a case or simply described as a free postposition.

This issue is especially relevant in the Indo-Iranian languages in the sample. Indo-Aryan case systems are said to be "easily the most problematic nominal category" (Masica 1991:230). The description of postpositions as case suffixes differs in the sample literature; the reasons vary but they sometimes seem to be the practical choices of the author.

Masica (1991:230-248) describes Indo-Aryan cases with a "Layer model", where different layers mark different kinds of cases. The innermost Layer I codes an oblique[2] case opposed to the unmarked nominative case. Layer II is mediated via the Layer I marking and can be "an agglutinative suffix or an analytic particle" (Masica 1991:233). The third Layer III is again mediated by Layer II. It can be an optional element (ibid.), it has usually no morphophonemic variation, and it has a specific semantic meaning (1991:234).

2.1.2 Typological features

This subsection briefly discusses some features that concern case on a formal level. These features are used in the result section of this thesis, to classify and compare the languages of the sample. Most of the features are listed in WALS and have a respective chapter there, which enables a further comparison of the data presented here with the data in WALS.

Number of cases

It is a seemingly basic, but surprisingly complex, question to ask how many case categories a language uses. By definition, to have a case system, a language must make a minimal distinction of two cases. Here, zero-marked base forms of a noun are counted as case as well (called "direct" or "default" by Iggesen (2013)).

[2] The oblique is understood as a general non-nominative core case, and not as a term for peripheral, non-core cases, as is sometimes done in other fields of linguistics (Blake 2001:203).

Two things, however, complicate this statement about the number of cases: the matter just mentioned above and case syncretism. In the results, therefore, I will provide two separate totals of the number of cases: the first one represents the respective author's analysis (although excluding the vocative); the second one is the number of cases which is calculated on the basis of inflection and form distinction. This distinction means that only suffixed case markers and different forms of case suffixes, qualify for being different cases.

Regarding size of case inventory, Iggesen (2013) makes the following classifications: A small inventory has 2–3 cases; mid-sized have 4–5 cases; 6–9 cases is a large inventory, and more than 10 cases is a very large case inventory.

Concerning the geographical distribution of this feature, Iggesen writes that "[l]arge and very large inventories are common in northern and central Eurasia". As the sample languages are spoken in an area which belongs to, or at least borders, central Eurasia, we can assume that the languages of the Hindukush region should also typically exhibit large case inventories.

Please note that the vocative is not considered a case in this study, and will not be listed in the result or description of the sample's cases. Vocatives do not appear as a dependent, i.e. they do not mark a grammatical relationship, and they have a pragmatic rather than syntactic(al) function (cf. Blake 2001:8).

The feature "Number of cases" is listed in WALS chapter 49 by Iggesen.

Attested case categories

The section about attested cases will briefly name and, when relevant, discuss the particular cases that are described in the language in question (for instance, how a certain case is marked, and which layer it belongs to etc.). The overall typological significance of this section might be of rather limited value, but can prove important for the overall areal-typological perspective of this study: It will provide an image of the sample languages and the cases they possess, and will show if there are any similarities observed across language families in the GHK region.

This category is not represented in WALS.

Means of case marking

Marking of case varies among the world's languages, although a great majority of the world's languages uses case suffixes (about 70% of all languages use case affixes or clitics in Dryer's sample

in WALS). Tone or changes in the noun stem are other means, and are very rare in Dryer's sample. A number of other case markings are described by Dryer, however, which are not relevant for the sample. Again, the findings in this thesis will be compared to sample presented in WALS.

In WALS, this feature is represented in chapter 51 "Position of case affixes" by Dryer (2013).

Case syncretism

Case syncretism is concerned with the inflectional paradigm of a language's case system. A language is said to have case syncretism when one form has several case functions, i.e. when the same inflectional form is used in different cases.

This phenomenon is not uncommon in the case systems of the world's languages. Of the 75 languages with case in Baerman & Brown's (2013) sample in WALS, 53% of these are reported showing some kind of case syncretism. The authors distinguish further between syncretism within the core cases only, and within core and non-core cases: About one half of his sample shows syncretism in core cases only, the other half shows core case in the entire paradigm. I will also make this distinction in the discussion.

Asymmetrical case marking

This feature deals with the 'consistency' of the case system in a language. More precisely, it deals with case inflection across the inflectional classes: Symmetrical case systems show "identical sets" (Iggesen in WALS) for all nominals. When languages shows asymmetrical system, it is understood that case marking is applied "more selectively across their lexicon, restricting the occurrence of certain (or all) cases to a subset of their nominals." (Iggesen 2013). Different subsets of nominals can display different case inventories; for instance, in Dameli, the ergative case occurs mainly with animates, whereas the instrumental occurs only with inanimates. About 45% of the languages with morphological case marking in the sample show some kind of asymmetrical case marking.

This feature is presented in WALS in chapter 50 in by Iggesen.

Alignment of case marking

The typological overview of case alignment, found in WALS' sample of 190 world languages, is another relevant survey for this thesis. Of these languages, 46 have standard nominative-accusative marking, and 32 languages use an ergative-absolutive system. The greater majority of the 98

languages show a neutral system. The following table summarizes the different systems and their distribution:

	Neutral	Accusative (NOM unmarked)	Accusative (NOM marked)	Ergative	Tripartite	Active-Inactive
Sum	98	46	6	32	4	4
Percent	52	24	3	17	2	2

Table 1: Alignment systems and their frequency in a worldwide sample.

Chapter 98 of WALS – *Alignment of case marking of full noun phrases* – is written by Bernard Comrie (2013a).

As an investigation of the case alignment systems of the sample languages is a major part in this study, the theoretical issues of case alignment will be given more coverage in the next section.

2.1.3 Case alignment and alignment systems

According to Bickel & Nichols, alignment is the "identical vs. distinct coding or treatment or behaviour of agent roles that are different at some other level or in some other part of the grammar." (Bickel & Nichols 2012:2).

Comrie defines alignment as the coding of S (the core and single argument of an intransitive verb), A (the agent-like argument of a transitive verb) and P (the patient-like argument of a transitive verb) (1978: 330). It is these terms S, A and P that I will use in my thesis.

The terms for the cases describing S, A and P are language specific. The unmarked case used for S is often called the direct case in the sample; nominative or absolutive are other terms. Some frameworks (and in fact, some authors of the sample descriptions) like to distinguish between a nominative and an absolutive, but as Comrie writes, in Indo-Iranian languages, there is "morphological identity between nominative of the nominative-accusative system and absolute of the ergative-absolute system [...]" (1978:352). It is not so much the term that is important, however, but the pattern, i.e. how S, A and P are grouped, and if/how A, S and P are marked (or unmarked), respectively.

Alignment is usually illustrated with an accusative vs. ergative alignment. However, an alignment system is seldom 'pure', i.e. it is seldom across-the-board ergative or accusative. Bickel & Nichols (2012:2) list three reasons for this: 1) Lexical splits develop, which might be based on verbs with different valence patterns; 2) grammatical splits develop, based on different aspects, tenses (a split that many of the sample languages exhibit), or lexical categories (although the latter pattern is found in the sample languages, this thesis focuses on nouns, which means this kind of split will not be investigated here); 3) alignments rarely take "relative coding of different objects and the coding of arguments like possessors [...]" into account.

This means that even a typical "accusative" language can show certain patterns of ergative marking, or, better, an ergative language may also have accusative marking in parts of its system. It is therefore more correct to speak of a scale of accusativity and ergativity in a system, or a degree of ergativity.

A language is thus rather predominantly accusative or predominantly ergative. Ergativity is seen as the typologically marked system.

In the following, different alignment systems are briefly presented. (For a thorough description of the different alignment systems, see Bickel & Nichols 2011, 2012; and Comrie 1978.)

2.1.3.1 Accusative systems

In nominative-accusative systems, S and A are marked in the same way. This form is usually zero-marked/unmarked, and often called nominative. P is marked, with a case that is often referred to as the accusative. The pattern is illustrated in table 2. Many well-known Indo-European languages, especially those spoken in Europe, are accusative (Blake 2001:118).

S A	P

Table 2: Accusative alignment.

2.1.3.2 Ergative systems

Blake (2001:121) writes that "at least twenty percent of the world's languages" use an ergative system. It has to be assumed that these twenty percent include the languages with a partly ergative

system: As has been mentioned above, it is rather a question of the extent to which a language employs an ergative system (cf. also Comrie 1978:350). Languages with "across-the-board ergative or accusative systems are a distinct minority" (Blake 2001:136).

Ergative alignment normally means that S and P are marked the same way, and A in a different way. The case marking A is often referred to as the ergative. Though, in the grammatical descriptions of the languages I have investigated in this study, this case is often called agentive, oblique or something different again. I will use the language-specific name for it in the respective section. Ergative alignment is illustrated in the next table:

S	P
A	

Table 3: Ergative alignment.

2.1.3.3 Neutral systems

In a neutral system, S, A and P are all marked the same way ("marked" includes zero-marking) (Comrie 1978:331), regardless of their syntactical position. English non-pronominal noun phrases represent this type.

S	P
A	

Table 4: Neutral alignment.

2.1.3.4 Tripartite systems

Pure tripartite systems, where S, A and P are all differently marked, are "relatively rare", or might apply only for a certain set of nouns (Comrie 1978:333).

S	P
A	

Table 5: Tripartite alignment.

2.1.3.5 Double oblique/ AP–S marking

The last logically possible grouping of A, S and P would be a system which groups A and P together, and marks S differently. Payne (1979:149) calls this alignment system *double oblique*. This system has earlier been designated as unattested in the world's languages (Comrie 1978:334), but is now described as "exceedingly rare". Some Pamir (Eastern Iranian) languages are attested to employ a double oblique alignment (cf. Payne 1979:153ff), although this is "restricted to some pronouns" (Comrie 2013b).

S	P A

Table 6: Double oblique/ AP–S alignment.

So far, these are the logically possible relations between S, A and P as presented by Comrie (1978).

2.1.3.6 Split systems

For the purpose of this study, at this point, the notion of a "split system" may be introduced. This system does not present a single alignment system as described so far, but it is rather a term to describe that different alignment systems are used within one language. Split systems do not describe one relation of S, A and P as the alignment systems above, they rather comprise several of these. Usually, a split system shows a more ergative alignment in certain parts of the language, and an accusative one in others. In fact, it must be assumed that most languages employ some kind of split system, i.e. they have categories which govern a slightly different alignment system. The splits can be based on a number of categories, but "[o]ne of the commonest ways in which languages manifest split ergativity is according to tense/aspect: in some tenses or aspects the

language is nominative-accusative, in others it is ergative-absolute." (Comrie 1978:351). A basic scheme for a split system is illustrated below, where the different environments represent the categories triggering the different alignments, in this case an accusative and an ergative pattern:

<table>
<tr><td colspan="2">Environment 1</td><td colspan="2">Environment 2</td></tr>
<tr><td>S
A</td><td>P</td><td>S</td><td>P
A</td></tr>
</table>

Table 7: Scheme of a possible split system, with an accusative alignment in Environment 1 and an ergative alignment in Environment 2.

Ascribing a language to an "accusative" or "ergative" system is usually not accurate. On the other hand, the term "split ergativity" is indeed quite unspecific, as it comprises several different alignment patterns. However, this term is of great practical value for this survey, which is why I will use this classification here.

2.2 The Hindukush region

This second subchapter aims to provide some background information on the "Greater Hindukush region", particularly its geographical definition in this thesis, the language families represented there, and the earlier studies and typological remarks about these families and languages.

2.2.1 The geographical area

Traditionally, the term *Hindukush* (also spelled *Hindu Kush*) refers to the mountain range in the north of (mainly) Afghanistan and Pakistan, that borders India (Kashmir) and China in the east, and to Tajikistan in the north.

However, in this paper, the term *Greater Hindukush* is used to refer to a slightly larger area than the Hindukush. The term was introduced by Liljegren (2014:134), and includes, in addition to the mountain range, a large part of Pakistan, the plains in the Southeast of the HK range, and

the adjacent areas towards Tajikistan and India. This geographical selection is understood to comprise the "multi-ethnic and multilingual highland region which lies at the crossroads of South and Central Asia, geographically as well as culturally." (Liljegren 2014:124).

Map 1. *The Greather Hindukush*, as defined by Liljegren (2015)

The definition of this term has a great practical value: as it is a contact area, there are commonalities in culture, religion and geography. However, the geographical selection does not take into account possible linguistic or political borders.

The area's geography entails certain preconditions that are interesting from a linguistic point of view: A prominent researcher of that area, Bashir (2003:821), writes that the HKIA languages "because of their isolation [...], have retained ancient and developed new characteristics different from the Indo-Aryan languages of the Indo-Gangetic plain."

2.2.2 Languages in the GHK

As already mentioned above, the Hinduhush is an area with a great linguistic diversity, with about 50 known languages (Liljegren, p.c.).

Most languages in the area are Indo-Iranian languages. Within these, the greatest number belong to the Indo-Aryan family. In the literature, those Indo-Aryan languages are often referred to as the "Dardic" languages (cf. Bashir 2003:818–894; Liljegren 2014:133–174). However, as this

term remains rather controversial for several reasons, I will adopt the more neutral term "Hindukush Indo-Aryan" (HKIA), as proposed by Liljegren (2014:135). ("Dardic" implies a distinct linguistic unity for these languages, an assumption which cannot clearly be accounted for. For a discussion, see Bashir 2003, Liljegren 2014 or Strand (website).) Other important languages are the Iranian and the Nuristani. In the northern part of the Hindukush, a few Turkic languages are spoken, and in the eastern part, some languages represent the Tibeto-Burman family. The language isolate Burushaski is also included in the area.

Language family	Quantity	Percent
Indo-Aryan/ HKIA	27	52
Indo-Aryan/ non-HKIA	4	8
Iranian	10	19
Nuristani	6	11
Tibeto-Burman	2	4
Turkic	2	4
Burushaski	1	2
Total:	52	100 %

Table 8: Language families in the Hindukush. (Based on Liljegren's data, p.c.).

Indo-Aryan is a subgroup of the Indo-European languages and is presently mainly spoken in India, Pakistan, Bangladesh, Nepal and Sri Lanka by about 640 million people (Masica 1991:8). Indo-Aryan languages are usually spoken by the majority in an area.

Iranian languages constitute also a major Indo-European language family, with about 150 to 200 million speakers (Windfuhr 2009:1), and are found in "Central Turkey, Syria and Iraq in the west to Pakistan and the western edge of [...] China", with its northernmost representative in Tajikistan (2009:5).

Nuristani, formerly also called Kafiri languages, have been treated as a subgroup of Indo-Aryan (Masica 1991:21), but are treated as a separate group of Indo-Iranian languages. Nuristani

languages are spoken on the Afghan side of the Hindukush. Richard Strand writes on his website that there are around 100.000–150.000 people ethnically belonging to Nuristani.

Tibeto-Burman languages are the "non-Sinitic" part of the Sino-Tibetan family (Thurgood 2003:7). They are spoken in northern India, south-east China and south-east Asia.

Turkic languages are widely distributed from Europe across Asia to north-east Russia (Johanson 1998:xvi). The number of speakers is around 100 to 150 million (Boeschoten 1998:12).

Burushaski is a language isolate, it is not (yet) shown to be affiliated with any other language or language family in the world (Berger 1998:3). Burushaski has at least 50.000 speakers (ibid.).

2.2.3 Alignment in the language families

I will at this point briefly present the typical alignment for the respective language family/ language group of the sample (for practical reasons, the table is split in half):

Indo-Iranian		
Indo-Aryan	Iranian	Nuristani
Split ergativity (Masica 1991:342)	Split ergativity (Windfuhr 2009:31)	Split ergativity (affiliation to Indo-Aryan)

Table 9a: Alignment in the sample's language families.

Tibeto-Burman	Turkic
Ergative alignment (DeLancey 2012:9)	Accusative alignment (Johanson 1998:52)

Table 9b: Alignment in the sample's language families.

As has already pointed out (2.1.3), these are generalisations, and a language seldom employs only one system.

Maybe the most problematic generalisation is the one for Indo-Aryan, which can have different ergative constructions (Masica 1991:341), in which agreement rules between verb and subject/ agent/experiencer differ (1991:340). Nonetheless, Masica writes that Indo-Aryan shows overall

"split ergativity". General information about Nuristani alignment was not found, but due to the close affiliation to Indo-Aryan, a split system is assumed here. Also the Iranian languages have a "tense-split" ergativity (Windfuhr 2009:31). Tibeto-Burman languages are considered to be "essentially ergative" (DeLancey 2012:10), but show splits in certain categories other than nouns. Turkic languages usually have an accusative alignment (Johanson 1998:52).

2.3 Areal typology

Areal linguistics studies the "similarities between geographically contiguous languages" (Dahl 2001:1456), and identifies and characterizes a linguistic area. Typology is concerned with a systematic classification of languages, based on „grammatical and phonological features, independent of genetic relationships" (2001:1456).

Whereas these two fields are concerned either with a geographical area or with features, the field of *areal typology* combines these and studies the geographical distribution of certain features: Areal typology is "the study of patterns in the areal distribution of typologically relevant features of languages." (2001:1456). It has both a descriptive and an explanatory value: Apart from investigating the features in question and the identification of patterns, the "processes [which] give rise to them" (2001:1456) are studied as well.

In this respect, language contact is concerned as well, as this might cause a language to change. It is assumed that languages "can sometimes become structurally very similar to each other without sharing much of their vocabulary (Koptjevskaja-Tamm 2010:573). Contact-induced change can be divided into "direct transfer[s]", i.e. the direct borrowing of forms or phonemes, and "structural replication", i.e. a structural, or grammatical borrowing (Koptjevskaja-Tamm 2010:571). Structural borrowing will be of particular interest in this study. It was usually assumed that "typologically marked properties" are more difficult to borrow. However, Koptjevskaja-Tamm suggests that it is the difficulty rather than the rarity that is the main parameter for borrowing (2010:574).

2.3.1 Earlier typological studies in the GHK

Liljegren (2014) investigated the alignment patterns in twelve closely related Hindukush Indo-Aryan languages. He considers several categories other than nouns, such as verb agreement and pronouns, and finds "various types of alignment splits" which he classifies into several subgroups (2014:134). As his survey is highly relevant for the present one, it will be mentioned more specifically in the discussion.

Tikkanen (2011) compares the Central Indo-Aryan language Domaki to other Indo-Aryan languages and to its neighbour Burushaski.

Bashir (1988) discusses mutual relations of the HKIA languages and surrounding languages, such as the Turkic languages, and discusses possible contact-induced changes.

3. Method

The research in this thesis is carried out by investigating a representative sample of languages spoken in the GHK. The sample consists of seventeen languages and is chosen with respect to the proportional size of each language family represented in the GHK as listed in 2.2.2. Those seventeen languages make out a third of the total amount of languages in the GHK. The distribution is as follows:

Language family	Total number	Percent	Percent of all GHK-languages
Indo-Aryan/ HKIA	7	41	52
Indo-Aryan/ non-HKIA	1	6	8
Iranian	4	23	19
Nuristani	2	12	11
Tibeto-Burman	1	6	4
Turkic	1	6	4
Burushaski	1	6	2
Total:	17	100%	100 %

Table 10: Distribution of the sample languages.

At the same time, this sample is also a convenience sample, i.e. the sample makes use of those grammatical descriptions of the languages that are available.

Data is taken from the material in two steps: First, excerpts are made from the different descriptions of the sample languages. Information about the general properties and description of the case system is excerpted, mostly from the chapters about nominal inflection in each grammar. Where possible, case paradigms are compiled with this data. The findings are used to present the "typological features" (see 2.1.2) for each sample language.

Second, all notes on the use of the core cases and possible comments on case alignment in the grammars are considered. The findings are compiled and used to make statements about the alignment in the particular language, and compound a pattern of the alignment system.

The results are compared and visualized with maps and tables, and put into a greater typological perspective by using the data of respective chapters in WALS.

This thesis is a synchronic study, but brief references to diachronic data might be made in the discussion.

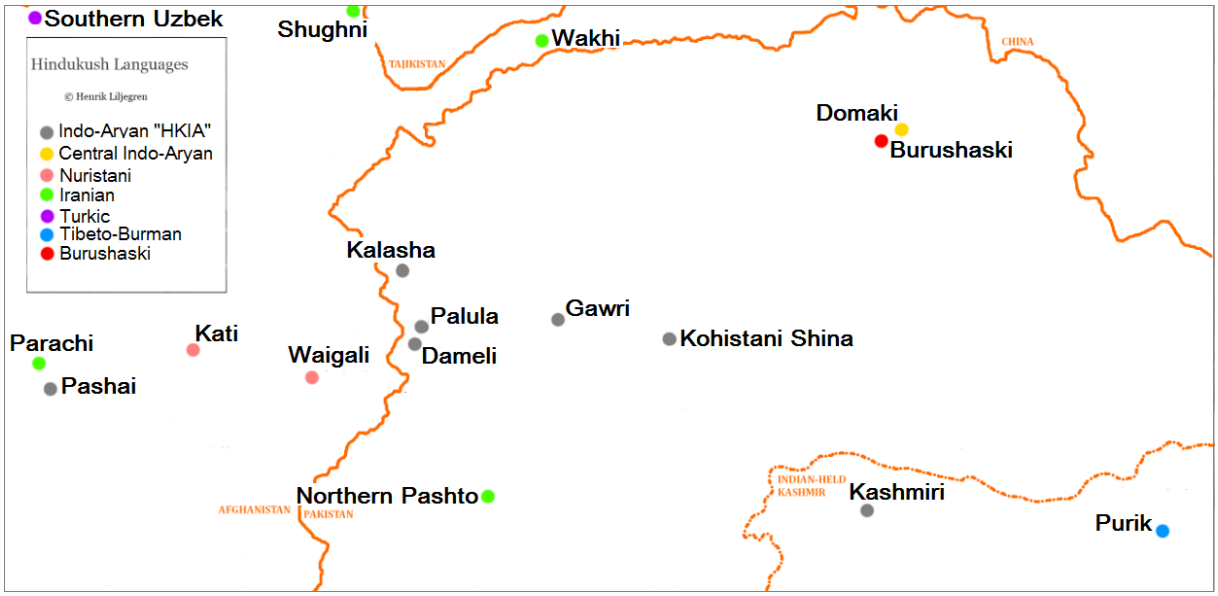
3.1 Material

The scope and depth of the grammatical descriptions of the languages varies quite considerably; some older descriptions, such as Morgenstierne 1938 or Davidson 1902, contain only brief or somewhat outdated notes about the topic. Whereas some of the more recent descriptions can represent a reference grammars written on a particular language with comprehensive data, others are brief sketches or focus on a particular topic, and provide thus only a limited amount of relevant data for this study. This fact has to be taken into account in the results; some languages will be discussed more thoroughly than others.

Another issue is the notion of ergativity in the descriptions. Some of these have been written before a general awareness of ergative systems. Here, a form-analysis of the core cases and their use, which takes this circumstance into account, will be made as far as possible. The case term "ergative" is ascribed to the German linguist Adolf Dirr (Seely 1977:1), who is said to have coined the term in 1912. However, Lindner (2014:189) showed in his paper that the term in fact has been used before, as early as 1872. (For a historical perspective on the term ergative, see Seely 1977, Manaster Ramer 1994 and Lindner 2014.)

3.2 Sample

The sample consists of the following seventeen languages. For each language, the Glottolog and the ISO 639-3 code (in this order) is given in parentheses.



Map 2. *Geographical distribution of the sample languages*. Map used with kind permission from Henrik Liljegren, with minor adjustments by the author

3.2.1 Hindukush Indo-Aryan

3.2.1.1 Kohistani Shina (kohi1248; plk)

Kohistani Shina, one of the dialects of the Shina language, is spoken in the Indus valley in north Pakistan (Schmidt & Kohistani 2008:3). The language is said to "present different and unique innovations" compared with other dialects of Shina (2008:3) Shina as a whole is said to have 360.000 speakers (2008:12), and according to the Ethnologue, Kohistani Shina has around 200.000 speakers. In my study, I used the grammar written by Schmidt & Kohistani about Kohistani Shina, published in 2008.

3.2.1.2 Gawri (kala1373; gwc)

Spoken mainly in the Swat district and bordering to the mountains of Chitral in the north (Baart 1999:3), the language has about 70,000 speakers (1995). The language is also referred to as *Kalami*, *Kalam Kohistani, Bashkarik* and others. Pashto, a lingua franca of the area, is spoken as a second

language by most people in the area (Baart 1999:2). Joan Baart's "A sketch of Kalam Kohistani Grammar" of 1999 is the source used for this language.

3.2.1.3 Kalasha (kala1372; kls)

Kalasha is a language of 5000–6000 speakers, who live in the Chitral valley in Chitral district (Heegård 2006:7). It is one of the smaller languages in the HK. In an adjacent village the Nuristani language Kati is spoken. An interesting cultural fact is that the Kalasha are the only people in the entire region that still adhere to their own traditional, pre-Muslim religion (2006:7). Data for Kalasha in this thesis comes from Elena Bashir from her 1988 dissertation "Topics in Kalasha syntax", in a chapter in the collected edition of Indo-Aryan languages by Cardona 2003, and from the PhD-thesis "Local case-marking in Kalasha" by Jan Heegård Petersen in 2006.

3.2.1.4 Dameli (dame1241; dml)

Dameli is spoken in the south-west of the Chitral district, with about 5000–6000 speakers as well (Perder 2013:3, 11). Pashto is spoken as a second language by almost all Dameli speakers (2013:11), and has doubtless influence on the language (Perder 2013:7). Emil Perder presents a grammar of Dameli with his dissertation from 2013, the source I will be using for Dameli.

3.2.1.5 Palula (phal1254; phl)

Located in the southern part of Chitral and adjacent to Dameli in the north, Palula (also written *Phalura*; Liljegren 2008:19) can be estimated to have close to 10,000 speakers (2008:24). It is the "second largest language community in Chitral" according to a survey 1992 (2008:24). The language is described by Henrik Liljegren in his PhD-thesis, published in 2008. I will use his description, which is also the first thorough documentation of the language, in the present study.

3.2.1.6 Kashmiri (kash1277; kas)

As its name already suggests, this Indo-Aryan language is spoken in the Kashmir valley, in the state of Jammu and Kashmir in India (Koul 2003:897), and is hence geographically in the outer region of the HK area. Koul (2003:897) estimates about 4 million speakers. The language is used in education, literature and mass media. Both Omkar Koul's sketch grammar from 2003 and his "Modern Kashmiri Grammar" of 2006 are used as a source here.

3.2.1.7 Pashai (pash1270; several ISOs)

Pashai (or *Pashayi*) is spoken in northeast Afghanistan, south of Nuristan (Bashir 2003:826), and it is the westernmost Indo-Aryan language of the sample. It is difficult to give a number of speakers. Pashai has a number of dialects, and their status/ mutual comprehension is unclear (2003:826). Bashir cites the Ethnologue, which ascribes the language around 110.000 speakers. Data about Pashai is rather scare. Apart from Georg Morgenstierne's grammar from 1967, a section in Elena Bashir's chapter "Dardic" in the Indo-Aryan Languages by Cardona (2003) provided the data for the present study. (Bashir's sketch of Pashai is partly based on Morgenstierne's data (Bashir 2003:826).)

3.2.2 Central Indo-Aryan

3.2.2.1 Domaki (doma1260; dmk)

Being the only representative for Central IA languages in the sample, it is also the smallest, with about 350 "souls" (Tikkanen 2011:206). The language community is concentrated in two mountain villages located in the Hunza and Nager valley in the Gilgit district in North Pakistan. It is furthermore completely surrounded by the language isolate Burushaski (2011:206). In the present thesis, data for this language comes from a chapter by Bertil Tikkanen, published in Studia Orientalia in 2011.

3.2.3 Iranian

3.2.3.1 Northern Pashto (nort2646; pbu)

Pashto is a widely spoken language, with about 22 million speaker in Pakistan and Afghanistan, where it even is an official and the national language (Robson & Tegey 2009:721). Despite being such a big language, there is no standardization of it (ibid.). Northern Pashto is spoken in northeast Afghanistan and in the Khyber Pakhtunkhwa Province (former NW Frontier Province of Pakistan) (ibid.). Differences between Pashto varieties are mainly lexical and phonological, and to a lesser extent grammatical. I will thus use a description about Pashto in general, written by Robson & Tegey (2009).

3.2.3.2 Wakhi (wakh1245; wbl)

Wakhi is an Eastern Iranian Pamir language that is spoken in the border area of Afghanistan, Tajikistan, Pakistan and China (Bashir 2009:825). The total amount of speakers is about 37,500, with about 9,500 speakers in Afghanistan, 12,500 in Tajikistan, 11,500 in Pakistan and roughly 4,000 in China (ibid.). Shughni is a widely known language among Wakhi speakers (Bashir 2009:826), and Wakhi speakers in Afghanistan normally speak Pashto as well. It is said to be a vital language with a "very positive attitude" toward the language among the speakers (2009:827). Data for Wakhi in the present study is taken mainly from Bashir's sketch of the language (2009), and from Morgenstierne (1938).

3.2.3.3 Shughni (shug1248; sgh)

The area where Shughni is spoken is the Mountainous Badakhshan Autonomous Region in Tajikistan, and the neighbouring province Badakhshan in Afghanistan (Edelman & Dodykhudoeva 2009:787), not far away from the Wakhi area. It is an East Iranian North Pamir language. Edelman & Dodykhudoeva note 80,000 speakers. Shughni is mainly a spoken language but serves nonetheless as a *lingua franc*a in the region. The description used here is Edelman & Dodykhudoeva's 2009 sketch grammar.

3.2.3.4 Parachi (para1299; prc)

This language of approximately 3,500 speakers (1981 census) is spoken north-east of Kabul in Afghanistan, in the southwestern foothills of the Hindukush (Kieffer 2009:693). Persian has considerable influence on the language. I will use Kieffer's description of Parachi (2009) for data.

3.2.4 Nuristani

3.2.4.1 Kati (kati1270; bsh)

The ethnic population is about 30,000–40,000; a specific number of speakers is not given (Strand 1998). Kati, also called *Bashgali*, is spoken in Nuristan in Afghanistan, bordering to the Chitral district of Pakistan in the east. The data in the study for this language comes from Davidson's 1902 description of Kati.

3.2.4.2 Waigali (waig1243; wbk)

Strand gives an ethnic population of "perhaps 10,000–30,000" on his website; the Ethnologue lists 11,000 speakers. The data in the present study is mainly taken from Degener's description of Waigali from 1998, and partly from Morgenstierne's notes from 1954.

3.2.5 Tibeto-Burman

3.2.5.1 Purik (puri1258; prx)

Being only a marginal part of the HK languages, this Western Archaic Tibetan language is spoken in the Kargil district in Jammu and Kashmir, India, by more than 100,000 people (Zemp 2013:3). A historical grammar about Purik was published by Zemp in 2013, which I will use as a source.

3.2.6 Turkic

3.2.6.1 Southern Uzbek (sout2699; uzs)

The Turkic languages have today a less important role in the Hindukush, but they might have played a more central role historically (for a discussion of possible Turkic influence on HKIA languages, cf. Bashir 1988:402ff.). In Tajikistan, the language has about 1.2 million speakers (Johanson 2006:288). Southern Uzbek has been "heavily influenced by East Persian in their vowel system" and in their lexis (Johanson 2006:290), but is not known to differ significantly in its grammar from Uzbek. For this reasons, and as there is no exclusive description of Southern Uzbek, the data in this thesis is taken from a shorter Uzbek grammar written by Landmann in 2010.

3.2.7 Burushaski

3.2.7.1 Burushaski (buru1296; bsk)

The language isolate Burushaski has at least 50,000 speakers, and its home are the Hunza and Yasin valleys, in the Gilgit district in north Pakistan (Berger 1998:3). For Burushaski, there is a number of descriptions available, among these Willson 1996, Grune 1998, and Munsi WIP. A comprehensive one is Berger's reference grammar from 1998, which I will mainly take my data from. Yet another reference grammar is written by Yoshioka Noboru (2012). However, as I have become aware of this description too late, it is not considered in this study.

4. Results

I will now present the results of the investigation of the general case properties and the alignment patterns. Each language will be given an own section, which is organized as follows:

The first subsection presents the findings of the general properties of case. As already mentioned above, I will state the number of cases, the attested case categories, the means of case marking (i.e. position of case affixes, stem modification, tone), if case syncretism occurs, and if the system has asymmetrical case marking.

The second subsection presents the core cases. These consist in most instances, i.e. in the Indo-Iranian languages of the sample, of a quintessential distinction between a nominative and an oblique case. Either an exemplary paradigm, or a table with the core case endings will be given.

The third subsection is concerned with the alignment system and contains a description of the function and use of the core cases. A table that shows the marking of S, A and P (with the language specific case terms) visualizes the alignment pattern.

A last subsection briefly presents the peripheral cases, usually with one exemplary paradigm. This is intended to visualize the previously mentioned results, and usually not discussed in detail

Morphological case marking in the sample

All seventeen languages of the sample have morphological case marking. With the exception of Shughni (4.11), all languages distinguish between at least two cases marked on nouns to signify grammatical relationship within a clause.

4.1. Kohistani Shina

Typological features

There are nine cases in Kohistani Shina. Attested cases are the nominative and oblique, the agent-imperfective, agent-perfective, possessive, dative, ablative-superessive, adessive and sociative (Schmidt & Kohistani 2008:40–68) (note the two different agentive cases). Cases are marked with suffixes in two layers (see 2.1.1 and Masica 1991:230f.): Layer I distinguishes between the NOM and OBL. The remaining cases are marked by Layer II-suffixes. There exist some nouns with a suppletive stem (Schmidt & Kohistani 2008:57). Case syncretism does occur, especially in the

NOM and OBL, but also in AG-Imp and POSS. Asymmetrical case marking is not reported in the description.

Core Cases

Kohistani Shina has two "inner" cases, the nominative and the oblique case. These are marked by Layer I-suffixes.

The nominative is formed by the noun's root with or without a gender suffix (Schmidt & Kohistani 2008:40).

The oblique takes a suffix that is attached to the root of the noun, which can have a gender suffix/marker as well. The oblique case is used with the remaining case suffixes belonging to Layer II, and with some (free) postpositions (2008:40). It is partly used to form the second core case, or cases, which are the two agentive cases AG-Impf and AG-Perf: Suffixes to form the agentive perfective are either attached to the OBL or to the NOM-form of the noun, and suffixes to form the agentive imperfective are attached to the NOM (Schmidt & Kohistani 2008: 51; 53).

As the oblique is part of forming the agentive core cases, and is also always part of patient-marking, I consider the oblique a part of the core cases as well, even if it is not used alone to mark any of the S-A-P relations. We would thus arrive at the following core case system for Shina:

	Masculine		Feminine	
	SG	PL	SG	PL
Nominative	áz-o rain-NOM.SG	áz-a rain-NOM.PL	ráat-i night-NOM.SG?	ráat-y-e night-F-NOM.PL
Oblique	áz-a rain-OBL.SG	áz-o rain-OBL.PL	ráat-i night-OBL.SG	ráat-y-o night-F-OBL.PL
Agent-Imperfective	áz-os	áz-as	ráat-y-is	ráat-y-es
Agent-Perfective	áz-oe	áz-oji	ráat-y-oo	ráat-y-oji

Table 11: Core cases in Kohistani Shina (Examples from Schmidt & Kohistani 2008).

In general, there is a lot of form syncretism between the nominative and the oblique. For instance, the NOM and OBL of feminine nouns in the singular are identical, as is a certain gender class of male nouns.

It remains slightly unclear in the literature how to analyse the <i> in the feminine singular forms, whether this is a gender or a case suffix. Liljegren (p.c.) reports a similar problematic issue in Palula and says that there is no obvious explanation for this. However, both genders show case syncretism in the NOM and OBL SG.

Alignment system

Subjects of intransitive verbs occur in the nominative. The subjects of transitive verbs take the agent-imperfective case in imperfective tenses. In perfective tenses, the subject takes the agent-perfective (Schmidt & Kohistani 2008:51; 53).

	S	A	P
Imperfective	NOM	AG-Impf	NOM
Perfective	NOM	AG-Perf	NOM

Table 12: Alignment pattern in Kohistani Shina.

In terms of alignment, it is thus the nominative and the two agentive cases that are important for marking the subject S and the agent A. The oblique does not seem to be used alone for marking the direct object. There is no explicit statement about the marking of P in the literature, but examples like the following suggest that the nominative is used, as in the following example from Schmidt & Kohistani 2008:

(1) pató phal th-wíi-t šóo
after throw do-fut-2.pl ashes
'afterwards you will throw the ashes'; P "ashes" is unmarked (p. 74).

(2) púc-ga at-óo-e sáati
son-also bring-fut-2.m.sg with
'you will also bring (your) son with (you)'; P "son" is unmarked (p. 75).

(3) mõ astót-o bar-o kom th-áa-s
I-AG.Perf that.much-M.SG great-M.SG work do-PERF.M.SG.-1
'I did such a great job'; P "work" is unmarked (p. 105)

The available data suggests that alignment in Kohistani Shina follows a quite consistent ergative system in the nouns: All subjects in transitive constructions follow an ergative alignment. However, there are two different ergative markers, which could be seen as two allomorphs of the same case. Their distribution is governed by aspect (imperfective – perfective).

Schmidt & Kohistani write that it is possible that the agent-imperfective case is borrowed, probably from Tibeto-Burman (2008:51). The agent-perfective on the other hand is an "old functional class" (2008:53) and was originally an instrumental case.

Peripheral Cases

The remaining cases are formed by suffixes attached to the oblique form (Schmidt & Kohistani 2008:40). The suffixes are (apart from the agentive cases already listed above): The possessive, dative, ablative-superessive, addessive and sociative. A noun used as an illative may appear in the oblique case too, where it can occur without another case suffix or postposition (2008:48). (The vocative is expressed by the nominative.)

	Masculine		Feminine	
	SG	PL	SG	PL
Possessive	áz-ee	áz-oo	ráat-y-ee	ráat-y-oo
Dative	áz-ar	áz-or	ráat-y-er	ráat-y-or
AblSup	áz-iji	áz-oji	ráat-i-ji	ráat-y-oji
Additive	áz-edi	áz-odi	ráat-i-di	ráat-odi
Sociative	áz-ase	áz-ose	ráat-i-se	ráat-yo-se

Table 13: Peripheral case paradigm in Kohistani Shina (examples from 2008:41).

4.2 Gawri

Typological features

There are 4 to 9 cases in Gawri, depending on the analysis. Baart lists nine forms that he calls "case". With respect to syncretism, there would be eight different cases. Of these, on the other hand, are only four marked inflectional, or morphologically bound. Attested cases are the nominative and oblique, agentive, locative, genitive, and the dative, instrumental, ablative and sociative

are marked with free postpositions. Case marking: Stem modification (vowel and/or tone change) is used to form the oblique (Layer I); suffixes and postpositions to form the Layer II-cases; postpositions belonging to Layer III to express a range of spatial and temporal relations. Case syncretism occurs, although relatively little: The agentive and locative are identical in form (but differ in function; see below). Some nouns have a zero-marked OBL, which results in syncretism between NOM and OBL. A statement about asymmetrical case marking of nouns is not possible, as there is no information about it in the description. Asymmetrical case marking within nouns does not occur. (Baart 1999:38).

Gawri has, apart from the Layer II-cases listed above, a rich system of Layer II-morphemes, which mark location or direction (Baart 1999:76f). Some of these morphemes are suffixed, others are postpositions. However, they are not analysed here or considered as cases in this context.

Core cases

Gawri has an "inner" two-case system consisting of the nominative and the oblique case. The nominative is formed by the noun root (Baart 1999:75). The oblique case is formed by stem modification, which can include vowel change or tone change, or both (Baart 1999:32). In Gawri, the oblique never occurs without another case suffix or postposition (1999:75); its function is to indicate that there is another marker following. The relevant cases for alignment are the nominative, the oblique and the agentive case:

	SG	PL
Nominative	bat	bät
Oblique	bät	bät
Agentive	bät-ä	bät-ä

Table 14: Core cases in Gawri, exemplified with the noun bat "stone" (Baart 1999:32).

Note that the NOM PL and the OBL SG and PL are, with a very few exceptions, identical (see Baart 1999:35), and stands thus in "opposition" to the NOM SG. This gives the author ground to an alternative analysis of an "uninflected" form (i.e. the NOM SG) and an "inflected" form (the NOM PL and the oblique forms) (Baart 1999:35). This pattern is also a reoccurring in the sample.

The agentive suffix is attached to the oblique form of the noun. Similar to Kohistani Shina, the agentive in Gawri is not part of the Layer I cases.

Alignment system

The nominative is used to mark the subject of imperfective or inceptive verbs (Baart 1999:134). The agentive is used to mark the agent in perfective clauses (1999:136). Accusative alignment, i.e. when the subject is unmarked, applies in clauses that are imperfective or "not marked for aspect". Ergative alignment applies for transitive verbs in perfective clauses.

Objects usually take the nominative case (Pronouns take the oblique) (1999:134). The imperfective shows thus neutral alignment for nouns.

	S	A	P
Imperfective	NOM	NOM	NOM
Perfective	NOM	AG	NOM

Table 15: Alignment pattern in Gawri.

Baart describes alignment in Gawri as a "split system", the split being "determined by aspect" (1999:134).

Periperal cases

Some of the cases listed above, for instance the dative, are marked by postpositions. The only cases marked by a suffix are the agentive, locative, and genitive. The locative is identical with the agentive. With respect to the marking, the peripheral cases consist of the genitive only. The marker of the genitive is the suffix –ā (Baart 1999:72). The function of the genitive is much wider than only possession; see Baart 1999:71.

4.3 Kalasha

Typological features

There are six or seven cases in Kalasha. Attested cases are the nominative, genitive-oblique, instrumental, ablative, locative and temporal (according to Heegård 2006:53ff). Bashir (2003:851) analyses an additional dative case. Case marking is achieved by suffixes, zero-marking and some suppletion (Heegård 2006:51). Case syncretism occurs. The system is highly asymmetrical:

According to Heegård, the cases INSTR, LOC, ABL and TEMP occur only with inanimates. The dative case according to Bashir applies only for "proper names" (2003:851).

Core cases

Important in this respect is the nominative and the genitive-oblique. The nominative is unmarked, except for animates in the plural. The genitive-oblique is marked by a suffix, which is different for the singular and plural. Apart from the case asymmetry, animates and inanimates take different case suffixes in the plural.

	Animate		Inanimate	
	SG	PL	SG	PL
Nominative	-Ø	-Ø, án, -an	-Ø	-Ø
Genitive-oblique	-as	-an, ón	-as	-an

Table 16: Core cases in Kalasha.

Alignment system

There are no restrictions of the nominative's use as subject (Heegård 2006:54). The genitive-oblique can have many functions (Heegård 2006:55); it marks the direct object of "affective" verbs (e.g. watch, hit, take care of), the indirect object, and "infinitival" objects (Heegård 2006:56). The nominative marks even the object of some transitive verbs. The alignment pattern can thus be represented as below:

S	A	P
NOM	NOM	GEN-OBL/ NOM

Table 17: Alignment pattern in Kalasha.

Kalasha employs an accusative alignment system. This is mentioned in Heegård 2006:33, also Bashir (1988 & 2003)) describes the alignment system as "nominative-accusative case marking".

Peripheral cases

The remaining cases apply only to inanimate nouns; all are marked by suffixes.

	Animate		Inanimate	
	SG	PL	SG	PL
Instrumental	–	–	-an	
Locative	–	–	-a, -una, -ai	
Ablative	–	–	-yei, -ani, -aw	
Temporal	–	–	-ano, -asa	

Table 18: Non-core cases in Kalasha.

4.4 Dameli

Typological features

Dameli has four cases, which are the nominative, ergative, locative, and instrumental, which are marked by suffixes. Case syncretism occurs: ERG and INSTR are identical, but the author emphasizes that there is "no overlapping" (Perder 2013:61). The ergative marks (mainly) animates and the instrumental only inanimates. This syncretism is also asymmetrical case marking.

Core cases

Core cases in Dameli are the nominative and ergative. The nominative is unmarked, the ergative case is marked by a suffix. The singular and plural take the same suffix (Perder 2013:56).

Nominative	-Ø
Ergative	-ee

Table 19: Core cases in Dameli.

Alignment system

The nominative is used to express A, S and P in in the imperfective and in the future, and S and P in past and perfective (Perder 2013:59). As P is marked the same way like S and A, we find a neutral alignment the imperfective. The A in the past and perfective is marked with the ergative.

	S	A	P
Imperfective	NOM	NOM	NOM
Perfective	NOM	ERG	NOM

Table 20: Alignment pattern in Dameli.

The Dameli noun alignment system shows a split system based on aspect (cf. Perder 2013:59).

Peripheral cases

The locative and instrumental are formed by attaching the suffix to the noun stem (and not the ergative/oblique) (Perder 2013:60–61).

Locative	-a
Instrumental	-ee

Table 21: Peripheral cases in Dameli.

4.5 Palula

Typological features

Palula has four cases. Attested cases are the nominative and the oblique, and the genitive and locative. Cases are marked with suffixes. Case syncretism can be found between the oblique (singular) and the nominative (plural), (Liljegren 2008:94), and between the locative and oblique plural (2008:95). Asymmetrical case marking does occur within different declension classes. Different declensions take different case suffixes (Liljegren 2008:93), and declensions may differ within their class: for example, the "m-declension" does not distinguish between NOM and OBL (Liljegren 2008:103).

Core cases

The core cases are the nominative and the oblique case. The nominative is usually represented by the noun stem, or ends in "gender-typical vowels", which could be analysed as nominative case markers (Liljegren 2008:93). The oblique is formed by a suffix.

	Singular	Plural
Nominative	-Ø	-a, -i, -m, -ee, -aan
Oblique	-a, í,	-am, -óom, -íim et al.

Table 22: Core cases in Palula (Liljegren 2008:90–94).

Alignment system

The nominative marks the subject of intransitive clauses and the direct object of "most transitive" verbs (Liljegren 2008:93) in the imperfective. The oblique marks the agent of perfective clauses. This gives us the following alignment pattern:

	S	A	P
Imperfective	NOM	NOM	NOM
Perfective	NOM	OBL	NOM

Table 23: Alignment pattern in Palula.

Palula case alignment of nouns represent a split system with a split in aspect.

Peripheral cases

The two forms analysed as a case apart from the core cases are the genitive, which has beside the possessive also an ablative function (also without postposition) (Liljegren 2008:94), and the locative, which is "formally identical" with the oblique plural (2008:95–96). The suffix can be attached both to the noun stem and to the oblique.

Genitive	-ii
Locative	-óom, -íim

Table 24: The peripheral case suffixes in Palula.

4.6 Kashmiri

Typological features

There are either eight cases (which includes two genitives) (Koul 2003) or four cases (Koul 2006). Attested cases are the nominative, ergative, locative, instrumental, dative, ablative, genitive 1 and

genitive 2. Case marking is done by means of suffixes. The paradigm shows a great deal of case syncretism. Taken this into account, one could describe the system as a four case system. Dative and locative are apparently identical in form, and so is the ablative and instrumental. They are listed separately, as they govern different postpositions. Also, genitive 1 is identical with the dative, and genitive 2 is identical with the ablative. The nominative is zero-marked in both the SG and PL. The ergative PL suffixes are identical with almost all other cases. Asymmetrical case marking is not reported.

Core cases

The nominative and absolutive are form-identical, but they show differences in agreement (Koul 2006:32). The ergative is marked by a suffix.

	Masculine		Feminine	
	SG	PL	SG	PL
Nominative-absolutive	-Ø	-Ø	-Ø	-Ø
Ergative	-an	-av	-i	-av

Table 25: Core cases in Kashmiri (Koul 2006:32).

Alignment system

In the past tense, an ergative marking of A applies in constructions with transitive verbs. Some intransitive verbs in the past tense can also govern the S to take the ergative (Koul 2003:932; 2006:31; 69). In the remaining contexts, S takes the nominative.

	S	A	P
Imperfective	NOM	NOM	NOM, DAT
Perfective	NOM (ERG)	ERG	NOM

Table 26: Alignment pattern in Kashmiri.

Direct objects can take the dative in the imperfective "under certain context" (Koul 2006:31). The direct object in the perfective takes always the nominative (ibid.). Even the dative can mark core

functions: subjects of "experiencer verbs", indirect objects, and "animate direct objects in the imperfective" in certain contexts (Koul 2006:31). In the imperfective, Kashmiri shows partly a neutral alignment.

Kashmiri employs a split system on the basis of tense-aspect.

Peripheral cases

The remaining cases are, according to Koul 2003, the following:

	Masculine		Feminine	
	SG	PL	SG	PL
Dative	-as/-is	-an	-i	-an
Locative	-as/-is	-an	-i	-an
Ablative	-ɨ	-av	-i	-av
Instrumental	-ɨ	-av	-i	-av
Genitive 1	-as	-an	-i	-an
Genitive 2	-ɨ	-av	-i	-av

Table 27: Peripheral case paradigm in Kashmiri (Koul 2003:908).

This paradigm shows a lot of syncretism; the only forms that occur here and not in the core case paradigm are the masculine DAT/LOC-suffix –is/-as, the masculine singular suffix -ɨ in the ABL, INSTR and GEN2 (that is, if we assume that it does differ from the feminine –i), and the masculine plural suffix –an, the latter form showing syncretism with the M SG ERG form. A different analysis could arrive at fewer cases: The DAT-LOC-GEN1 can be merged, and the ABL-INSTR-GEN2. This would give the following paradigm:

	Masculine		Feminine	
	SG	PL	SG	PL
DAT-LOC-GEN1	-as/-is	-an	-i	-an
ABL-INSTR-GEN2	-ɨ	-av	-i	-av

Table 28: Reduced peripheral case paradigm in Kashmiri.

The feminine ABL-INSTR-GEN2-case is identical in form with the ergative; we could thus assume asymmetrical case marking in this system. As a matter of fact, Koul's description of Kashmiri 2006 presents the peripheral cases as shown above (2006:31ff).

4.7 Pashai

Typological features:

According to Bashir (2009), there are six cases in Pashai. These are the nominative, oblique, genitive, locative, ablative, illative. Cases are marked with suffixes. Case syncretism is not reported (according to Morgenstierne 1967:64). Asymmetrical case marking occurs. Morgenstierne (1967:64) writes that all substantives take the same case marker, but the ablative and allative occurs only with inanimate nouns (1967:65).

Core cases

The nominative is zero-marked. Case endings are the same in the singular and plural (Morgenstierne 1967:64).

	Singular & Plural	(certain loanwords)
Nominative	-Ø	(-an)
Oblique	-e,-u / -aa,-ə	(–)

Table 29: Core cases in Pashai.

Alignment system

S is marked with the nominative (Morgenstierne 1967:67). A is marked with the nominative in non-past tenses and with the oblique in the past tenses (sometimes, A is marked with the nominative in the past (1967:67)).

P is, according to Morgenstierne (1967:68), generally marked with the nominative in all tenses. There is one doubtful example of P in the oblique (1967:69). A regular exception are pronouns, where first and second person singular pronouns take the oblique (Morgenstierne 1967:68).

Bashir (2003:827) writes that indefinite "[d]irect objects are nominative", and definite objects "oblique". However, as Bashir's sketch of Pashai is based on Morgenstierne's data (2003:826), and as she does not give examples, this latter claim would require further investistigation.

	S	A	P
Non-past tenses	NOM	NOM	NOM/OBL
Past tenses	NOM	OBL (NOM)	NOM/ (OBL)

Table 30: Alignment pattern in Pashai.

Pashai has a split ergative system in the nouns, with a split in tense-aspect. There is a partly neutral alignment in the non-past tenses (according to Morgenstierne). When taking pronouns into account, Pashai employs partly a double oblique-alignment.

Peripheral cases

The markers for the remaining cases are suffixed to the oblique form of the noun. Case markers are the same for the singular and the plural:

Genitive	-as
Locative	-a
Ablative	-ai
Illative	-na

Table 31: Peripheral case endings in Pashai.

4.8 Domaki

Typological features

The number of cases is eight. Attested cases are the nominative, instrumental-ergative, general oblique, a dative (in some dialects), genitive, ablative, inessive-illative and elative. Cases are marked by suffixes and sometimes stem alternation (the final stem vowels are replaced). The description does not imply case syncretism. Asymmetrical case marking occurs: Feminine and masculine nouns take different suffixes in the INSTR-ERG SG and in the NOM PL respectively (Tikkanen

2011:207). Tikkanen analyses 23 different declension classes with partly different markers, especially in the plural (2011:208). Domaki has different case endings in the singular and plural.

Core cases

With respect to the many declension classes, an exemplary case paradigm with all suffixes is not possible to give. However, Tikkanen (2011) presents an overview on page 207, and the following paradigm shows suffixes of the larger masculine and feminine classes (2011:209ff). The core cases are the nominative and the ergative, and to a certain extent the oblique. Note that not all cases have different suffixes for masculine and feminine nouns.

	Singular		Plural	
	M	F	M	F
Nominative	-Ø/ -ō		-a/-e	-oŋ, -ŋa
Ergative-Instrumental	-an	-ya	-ee	
Oblique	-as		-ec	

Table 32: Core cases in Domaki.

In contrast to most of the HKIA languages, Domaki has distinct suffixes for the singular and plural.

Alignment system

The nominative is used to mark S and P (Tikkanen 2011:211–212). The A is marked in the instrumental-ergative case (Tikkanen 2011:213) (which is also used to mark "instruments").

S	A	P
NOM	ERG	NOM/OBL

Table 33: Alignment pattern in Domaki.

Usually, the nominative marks the P of transitive verbs. The oblique marks P of certain transitive verbs and in some other contexts ("verbs signifying [...] 'hitting', [...] 'seeing'" etc.) (Tikkanen 2011:215). In these cases, Domaki shows a tripartite system.

Domaki is said to be "heavily influenced" by Burushaski (Tikkanen 2011:225). Tikkanen also states that the "use of the instrumental-ergative with transitive verbs in all tenses in Domaki is in line with Burushaski and Shina" (2011:226), which agrees with my results for Shina.

On the basis of nouns, Domaki follows an ergative alignment.

Peripheral cases

Domaki has the following peripheral cases:

	Singular	Plural
Genitive	-ei, -i, -ye	-ŋe
Ablative	-smo, -oo	-cmo
Inessive-illative	-na	-mei
Elative	-no	-meyo

Table 34: Peripheral case endings in Domaki (Tikkanen 2011:207).

4.9 (Northern) Pashto

Typological features

Pashto has two cases, the direct and the oblique (Robson & Tegey 2009:727). Case marking is achieved by suffixes. Case syncretism occurs; the cases are often identical in the singular. Asymmetrical case marking occurs; some feminine and masculine declension classes have a zero-marked oblique, other take a suffix.

Core cases

Pashto distinguishes between a direct and an oblique case. Case suffixes vary within one gender and between declension classes.

	Singular		Plural	
	M	F	M	F
Direct	-Ø, -ay, -â	-a, -ey, -â	-ân, -una, -i (et al)	-e, -ey (et al)
Oblique	-Ø, -i, -â	-e, -ey, -â	-âno, -uno, -o (et al)	-o, -eyol (et al)

Table 35: Core case endings in Pashto.

Alignment system

The use of cases is as follows (Robson & Tegey 2009:730): The direct case is used for S, A and P in present tense-aspect, and marks S and P in past clauses. The oblique marks A in the past aspect (2009:730), and marks objects of adpositions (the oblique marking of P in table 36 is therefore put in parentheses).

	S	A	P
Present	DIR	DIR	DIR, (OBL)
Past	DIR	OBL	DIR, (OBL)

Table 36: Alignment pattern in Pashto.

Northern Pashto employs a split system with a split in tense-aspect. A neutral system is employed in the present tense-aspect, the past tense-aspect has ergative marking. If considering objects of adpositions, there are instances of a double oblique-alignment in the past tense-aspect in Pashto.

Peripheral cases

Pashto has no morphological marking of peripheral cases on nouns.

4.10 Wakhi

Typological features

Wakhi has five cases, these are: the nominative (called *direct*), oblique 1 and oblique 2, a dative/goal case and an ablative/source case. Cases are marked with suffixes. Case syncretism occurs between the direct and the oblique singular (according to Bashir 2009). Asymmetrical case marking is not mentioned in the literature.

Core cases

Wakhi distinguishes between a direct case and an oblique. Bashir (2009:828) analyses two different oblique cases, which she calls "simple oblique" and "focused oblique", the difference being a "front or mid vowel" marker (a suffix) on the latter, as opposed to the unmarked oblique 1 (2009:829). This second, "focused" oblique case is listed as a layer 2-case in Bashir (2009). It marks "some

transitive past tense subjects" and "some direct objects", as well as "some genitive relations" (Bashir 2009:829). Both cases can occur with prepositions (2009:829).

	Singular	Plural
Direct (Layer I)	-Ø	-išt
Oblique 1 (Layer I)	-Ø	-ev
Oblique 2 (Layer II)	-e	-ev-e

Table 37: Core cases in Wakhi.

Alignment system

In non-past tenses, S and A are marked with the direct case. In the past tense, Bashir (2009:842) notes considerable variation within the dialects of Wakhi: In certain dialects, S and A is marked in the direct case, and P in OBL2, coming close to an accusative alignment. In other dialects, A is marked with the OBL1, coming closer to an ergative alignment.

	S	A	P
Non-past & past tenses	DIR	DIR	OBL2

Table 38a: Alignment pattern in Wakhi in dialects 1.

	S	A	P
Non-past tenses	DIR	DIR	OBL2
Past tenses	DIR	OBL1	OBL2

Table 38b: Alignment pattern in Wakhi in dialects 2.

Wakhi shows a split ergative system in a number of dialects; other dialects seem to use a more consistently accusative alignment system. (In dialect 2, a tripartite marking can be attested for clauses where S and A appear in different numbers.)

Peripheral cases

The remaining cases are a dative and an ablative case, which can also occur with prepositions.

	Singular	Plural
Dative/ Goal	-e-r	-ev-e-r
Ablative/ Source	-e-n	-ev-e-n

Table 39: Peripheral cases in Wakhi.

4.11 Shughni

Typological features

Shugni does not show morphological case marking on nouns (Edelman & Dodykhudoeva 2009:794). To evaluate the cases and the alignment system, I will at this point look at another category than this, namely adnominal demonstrative pronouns. Here, the attested cases are the direct and the oblique case. Shughni has thus two cases (apart from syntactical case markers), marked by demonstrative pronouns (2009:804). These show no case syncretism.

Core cases

Cases are the direct and the oblique, indicated by the case of the demonstrative pronouns. These distinguish between gender, direct and oblique, and singular and plural (Edelman & Dodykhudoeva 2009:795).

Alignment system

Shughni does not use inflection on the noun, but has syntactical marking (2009:804): The direct case is unmarked (2009:804), and used for S. The oblique case can be marked by a preposition for the direct object, and by a verb or postpositions for the indirect object (2009:804).

S	A	P
DIR	DIR	OBL

Table 40: Alignment pattern in Shughni.

There are some features, e.g. a different pronoun in the third person singular for transitive and intransitive verbs (2009:800), which reflect “an earlier ergative system”. However, as all subjects

are marked by the direct case, as stated by Edelman & Dodykhudoeva (2009:804), Shughni may be said to have an accusative alignment.

Peripheral cases

Edelman & Dodykhudoeva list a number of postpositions, which may be suffixed. These are not identified as cases, although their function can be related to several locative cases, a temporal and a sociative (2009:796); three of these postpositions are identified to function as "markers of main syntactic cases".

4.12 Parachi

Typological features

There are either seven or three cases in Parachi. The three are inflectional cases: direct, oblique and ablative, and the remaining four cases are marked by adpositions: accusative, dative, locative-direct, instrumental-comitative (an inflectional marked numerative is also attested; Kieffer 2009:698). Case marking is achieved by suffixes or unstressed adpositions (Kieffer 2009:697). Case syncretism occurs as follows: the OBL SG for names and the DIR PL have identical forms, and the DIR PL and ABL PL. Asymmetrical case marking is attested; personal names and pronouns receive a different marker (Kieffer 2009:709).

Core cases

Parachi has two cases that are important in this matter, the inflectional cases direct and oblique. An adpositional marked accusative, in combination with the direct case form, is also used to mark core relations (Kieffer 2009:696).

	Singular	Plural
Direct	ōsp-Ø	ōsp-ān
Oblique	ōsp-eka, Alī-ān	ōsp-āna
Accusative (prepositional)	ma ōsp	(–)

Table 41: Core case paradigm in Parachi of the noun *ōsp* "horse".

Alignment system

S takes the direct case in the present tense, and in past tense intransitive constructions (Kieffer 2009:710). A is generally "unmarked" (2009:710), if not pronominal. The "direct object [...] is marked by the oblique case" in all tenses (Kieffer 2009:710), although the accusative preposition is also used for "specific direct objects" (Kieffer 2009:697). The marking of P shows thus a variation which the present data is not sufficient to describe more explicitly.

	S	A	P
Present tense	DIR	DIR	OBL (ACC)
Past tense	DIR	DIR (OBL)	OBL (ACC)

Table 42: Alignment pattern in Parachi.

Kieffer (2009:710) writes that Parachi is an "ergative language" with ergative marking in the past tense; for the study, Parachi would thus classify as a language with split system. However, the ergative marking is restricted to pronouns (2009:710). For noun alignment only, Parachi seems to use a more accusative alignment.

Peripheral cases

Parachi uses a number of adpositions, which might be suffixed, to express further case relations in a clause (Kieffer 2009:696):

	SG	PL
Ablative (inflectional)	ōsp-ī	ōsp-ān
Dative (postposition)	ōsp-kon	(–)
Locative-Direct (PP)	ōsp-tar	(–)
Instrumental-Comitative (PP)	ōsp-pen	(–)

Table 43: Peripheral case paradigm in Parachi of the noun *ōsp* "horse".

4.13 Kati

Data for this language relies on the oldest descriptions of the sample literature; Davidson 1902.

Typological features

The number of cases in Kati is four to six. Attested cases are, according to Davidson 1902, the nominative and agentive, the genitive, dative, locative and accusative. Case is marked by suffixes. A lot of case syncretism occurs (Davidson 1902:5); see paradigm below. Thus, we could speak of only four cases as well. The literature does not give sufficient data to make a statement about asymmetrical case marking.

Core cases

The nominative singular and plural are "often" identical (Davidson 1902:2), so is the agentive and nominative in the singular. The agentive is formed by a nasalized vowel; according to Grierson, cited by Davidson, even in the plural (1902:2; cf. Waigali). The accusative can be identical with the nominative, or take one of the listed suffixes.

	Singular	Plural
Nominative	-Ø	-Ø, (-ān)
Agentive	-ẽ	-ān, -ōn, (-ẽ)
Accusative	-Ø, (-a/-e/-o)	-ōn

Table 44: Core case endings in Kati.

Alignment system

In Kati, S is marked with the Nominative. Davidson (1902:2) expresses uncertainty about the use of the agentive, as he has both examples where A is marked with the agentive, and where it takes the nominative. However, as there do exist examples with an ergative alignment, we can assume a split system. The object is usually marked with the accusative, except in ergative constructions, where it takes the nominative.

	S	A	P
Present tenses	NOM	NOM	ACC
Past tenses	NOM	AG/NOM	NOM/ACC

Table 45: Assumed alignment pattern in Kati.

Peripheral cases

The genitive has "often no suffix" (Davidson 1902:4), in which cases it is only marked by a postposition. The dative, locative and ablative have a variety of case suffixes which is often identical with the agentive, and occur with a postposition. Davidson (1902:6) presents the following case endings:

	Singular	Plural
Genitive	-Ø, -s, -est	-Ø, -st
Dative	-ē, -ā, -ī, -ō + tā	-ān, -ōn + tā
Ablative-locative	-ē, -ā, -ī, -ō + stē	-ān, -ōn + stē

Table 46: Peripheral case endings in Kati.

I would propose to exclude the dative, ablative and locative from the paradigm, as the noun takes the oblique/agentive form, and these cases are marked with (identical) postpositions. This would then justify a case system consisting of the four cases nominative, oblique, accusative and genitive.

4.14 Waigali

Typological features

There are four cases in Waigali. Attested cases are the nominative, oblique, instrumental-ablative, and locative. Cases are marked with suffixes. Case syncretism and asymmetrical case marking seems not to occur.

Core cases

Relevant cases here are the nominative (which Degener calls "Casus Rectus"; 1998:137) and the oblique. The nominative is unmarked, the oblique is marked with a suffix.

	Singular	Plural
Nominative	-Ø	(–)
Oblique	-a	-ã

Table 47: Core case endings in Waigali.

Apart from its core case functions, the oblique case is used with postpositions. Only the oblique has a plural form (a nasalized vowel ã), the nominative plural is identical with the singular.

Alignment system

The nominative is used for S of intransitive verbs in all tenses, and for A in non-past tenses (Degener 1998:137). The oblique marks A in the past tenses (1998:137), and is used with postpositions.

	Subject	Agent	Patient
Non-past tenses	NOM	NOM	OBL (definite objects)
			NOM (indefinite objects)
Past tenses	NOM	OBL	NOM

Table 48: Alignment pattern in Waigali.

Waigali distinguishes between objects that are definite (objects that are known, "individual" objects and personal names; Degener 1998:135) and indefinite. Thus, definite P's are marked with the oblique, indefinite P's take the nominative (Degener 1998:138;139; cf. also Morgenstierne 19654:169). Degener writes that Waigali is "morphologisch ergativisch" (1998:139), and the pattern shows that Waigali uses a split system based on tense-aspect. Interesting is the split even in the marking of P, a pattern that is not attested in the other sample languages.

Peripheral cases

The Instrumental-ablative has also locative functions, and can be combined with a number of postpositions (Degener 1998:142). The locative can also express directions of movement. It can be combined with postpositions and some affixed prepositions (Degener 1998:144). Number is not distinguished in these cases.

Instrumental-ablative	-i
Locative	-iw

Table 49: Peripheral case endings in Waigali.

Morgenstierne (1954:171–173) names some postpositions, which can also occur suffixed, with mostly locative and relational (possessive) meanings. However, they are not analysed as case in Degener 1998, and neither are they listed here.

4.15 Purik

Typological features

There are seven (possibly nine) cases in Purik (Zemp 2013:375). Attested cases are the absolutive, ergative, dative, genitive, locative, ("traces of a") terminative (2013:336), inessive. Apart from these seven cases, Zemp analyses a further suffix with different functions; apart from a locative function (2013:365), it is said to function as an ablative (2013:369), and as a comitative-instrumental case (2013:375). Cases are marked by suffixes. Case syncretism seems not to occur, if we do not view ABL and COM-INSTR as separate cases. Asymmetrical case marking is not reported.

Core cases

Core cases in Purik are the absolutive and the ergative. The absolutive is unmarked, the ergative is marked by a suffix.

Absolutive	-Ø
Ergative	-s/-is

Table 50: Core cases in Purik.

Alignment system

Purik has, according to Zemp, a "strict ergative alignment" (Zemp 2013:313), with both an ergative and an absolutive case. The absolutive is unmarked and used for S and P, the ergative is marked and used for A (2013:317).

S	A	P
ABS	ERG	ABS

Table 51: Alignment pattern Purik.

Tibeto-Burman languages are well-known to use an ergative system (Blake 2001:121), and the alignment of nouns seems to support this. However, as for many other languages, other categories would have to be investigated to give a more comprehensive picture of alignment.

Peripheral cases

The terminative appears only a marginal, and the use of the ABL/ INSTR-COM suffix as a case is debated (Zemp 2013:365; 369).

Genitive	-i
Dative	-(l)a
Locative	-ka
(Terminative)	-tu/du
Inessive	-j-aŋ
Ablative	-na
Instrumental-comitative	-na

Table 52: Peripheral case paradigm in Purik.

4.16 (Southern) Uzbek

Typological features

Uzbek has six cases, which are the uninflected nominative, the genitive, dative, accusative, locative and ablative. The possessive suffixes are not analysed as a case. Cases are marked by suffixes. Case syncretism does not occur. Asymmetrical case marking is not reported in the literature.

Core cases

Core cases are the nominative and the accusative. The nominative is unmarked, the accusative is marked by a suffix. The suffixes are the same for the singular and plural. As typical for the Turkic languages, number markers are separate morphemes (Boeschoten 1998:360); the case suffixes are thus the same for both singular and plural.

Nominative	-Ø
Accusative	-ni

Table 53: Core case endings in Uzbek.

Alignment system

Both S and A take the nominative, and P is marked with the accusative. If P is indefinite, it can take the nominative as well (Landmann 2010:11) and thus represent a neutral alignment.

S	A	P
NOM	NOM	ACC
		NOM (indefinite objects)

Table 54: Alignment pattern in Uzbek.

The alignment pattern in (Southern) Uzbek is predominantly accusative.

Peripheral cases

Uzbek has the following peripheral cases:

	SG & PL
Genitive	-ning
Dative	-ga
Locative	-da
Ablative	-dan

Table 55: Peripheral case endings in Uzbek.

4.17 Burushaski

Typological features

Number of cases: the analyses found in the literature differ considerably concerning the number of cases in Burushaski (a striking fact is that these quite differing analyses are made in roughly the same time; between 1996 and 2011/forthcoming).

Munshi (forthcoming) analyses eight cases (which contains syncretism in the ERG and GEN, and in the second LOC-suffix and INSTR. Berger distinguishes between different kind of cases ("endlungslose, allgemeine, spezifischen und erstarrten Kasus", 1998:58). He lists six cases, the absolutive, genitive, ergative, oblique, dative-allative, and ablative (Berger 1998:58). Tikkanen

(2011:225) gives a short overview over Burushaski cases and writes the following: "Burushaski has fifteen productive noun cases. The five basic ones are absolutive (-Ø), ergative (-e), genitive (-e, f. –mo), dative (-ar), and ablative (-um). [...]"

Grune (1998:6) refers to only three cases, the absolutive, oblique and the genitive, and notes even that the oblique and genitive are "almost the same", thus, only two cases could be postulated. This case syncretism in the core is supported by Munshi (forthcoming). In line with Grune, even Willson (1996:6) analyses three cases, an absolutive, ergative and oblique case (where the ergative and oblique are identical for non-feminine nouns).

Cases are marked with suffixes. Case syncretism occurs in the system, according to Grune, Munshi and Berger. Asymmetrical case marking is also attested (Berger 1998:58).

Core cases

The core cases are the unmarked absolutive and the marked ergative.

Absolutive	-Ø
Ergative	-e

Table 56: Core cases in Burushaski.

Alignment system

The absolutive is used to mark both subject and patient (Berger 1998:64). The ergative is used to mark the agentive.

Subject	Agent	Patient
NOM	ERG	NOM

Table 57: Alignment pattern in Burushaski.

The alignment of nouns is in general ergative in Burushaski.

Again, the picture would become much more complicated when considering the alignment of pronouns as well (cf. Berger 1998:64f.). Here, we find ergative marking of the agent in certain environments, and we can postulate a split system with splits in person, tense and aspect.

Peripheral cases

The oblique is used to mediate other case suffixes (Berger 1998:58). The genitive is identical with the ergative for some sets of nouns, another set of nouns marks the genitive with the oblique suffixes (Berger 1998:58).

Oblique	-mo/-mu-
Genitive	-e; -mo, -mu
Dative-allative	-ar
Ablative	-um, -m, -mo

Table 58: Peripheral case paradigm in Burushaski.

It could be argued if the genitive is a necessary category in this paradigm, as it is form identical with the ergative and the oblique – which could be said to express the functions of the genitive.

5. Discussion

5.1 General properties of case in the sample

The properties of the case systems in the sample presented typologically expected values; very few of the findings stand out in a typological perspective, as the following maps show.

The number of cases in the sample possibly, and arguably, differs from the worldwide sample, with there being a tendency towards either large case inventories (according to the literature), or medium-sized inventories (according to my analysis which takes case syncretism into account).

The following table lists the figures of the investigated features:

	Σ descr	Σ alt	Marking on nouns	Syncretism		Asymmetry
				Core	Non-core	
Kohist. Shina	9	9	Suffix	+	+	-
Gawri	9	**4**	Suffix, stem modif., tone	+	+	-
Kalasha	6	6	Suffix, (suppletion)	+	+	++
Dameli	4	**3**	Suffix	+	+	+
Palula	4	4	Suffix	+	+	+
Kashmiri	8 (4)	**4**	Suffix	- (!)	++	-
Pashai	6	6	Suffix	-	-	+
Domaki	8	8	Suffix, stem alternation	-	-	+
N.-Pashto	2	2	Suffix	+	+	+
Wakhi	5	**4**	Suffix	+	+	-(?)
Shughni	2	2	– (Dem.pron; syntactic)	-	-	-
Parachi	7	**3**	Suffix	+	++	+
Kati	6	**4**	Suffix	+	++	?
Waigali	4	4	Suffix	-	-	-
Purik	9	**7**	Suffix	-	-	-
Uzbek	6	6	Suffix	-	-	-
Burushaski	15; 8; 2	**5**	Suffix	- (!)	+	+

Table 59: Overview over typological features of the case systems in the sample.

The column "Σ descr" represents the highest number found in the literature (except for Burushaski and Kashmiri, where different analyses are represented). The label "Σ alt" stands for sum alternative, and represents this alternative view of the number of cases. In the syncretism and asymmetry columns, - represents zero syncretism/no asymmetry, + = some (at least one instance), ++ = considerable (more than two).

I will now go through the features one by one.

5.1.1 Number of cases

The hypothesis that most of the sample languages will have large case inventories can be confirmed by the following fact: eleven of the seventeen sample languages appear to have a "large" case system (six and more), when we look at the categories presented by the descriptions.

However, when investigating the categories with respect to case syncretism, this result is challenged, and we find more medium-sized inventories. A convincing example here is Koul's own analyses of Kashmiri from 2003 and 2006, which differ exactly in this regard, his 2003 description mentions eight cases; yet in 2006, obviously factoring in syncretism, he postulates four. A further issue was to decide to what degree postpositional marked cases might qualify as a case or not. This can only be done insufficiently without further knowledge of the language, and might present a possible flaw in my analysis.

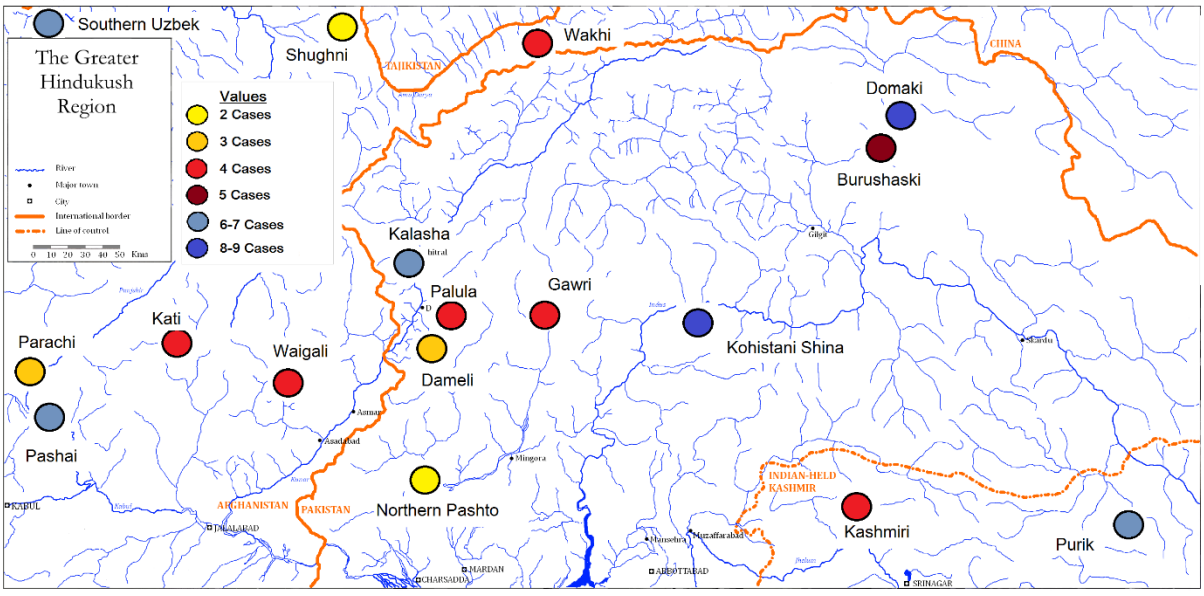
The first analysis would thus confirm the hypothesis about large case inventories in the central and northern Eurasian languages, and support the view that the GHK languages can be counted as belonging to these. The second analysis does not support this hypothesis, and would rather support the view that the GHK languages are more closely affiliated with southern Eurasian languages: The greater languages adjacent to the area also show small case inventories. Hindi, for instance, has a two-case system and distinguishes between direct and oblique (Montaut 2004:56), similar to many of the sample languages.

Taking these two perspectives into account, either 65% or 36% of the sample languages have a large case inventory, compared to 35% in the worldwide sample. The alternative analysis would come closer to the figures in the worldwide sample (but present a high number of medium-sized inventories):

	Worldwide sample (WALS)		Sample (descriptions)		Sample (alternative analysis)	
Inventory size	Total	Percent	Total	Percent	Total	Percent
0 (No morph. marking)	100	42	0	0	0	0
2 cases	23	10	2	11.5	2	11.5
3 cases	9	4	0	0	2	11.5
4 cases	9	4	3 (4)	17.5	6	35
5 cases	12	5	1	6	1	6
6–7 cases	37	15	5	30	4	24
8–9 cases	23	10	6	35	2	12
9+ cases	24	10	(1)	(6)	0	0
Sum	237	100	17	100	17	100

Table 60: Number of cases in the sample compared to WALS.

The following map shows the number of cases for the alternative analysis:



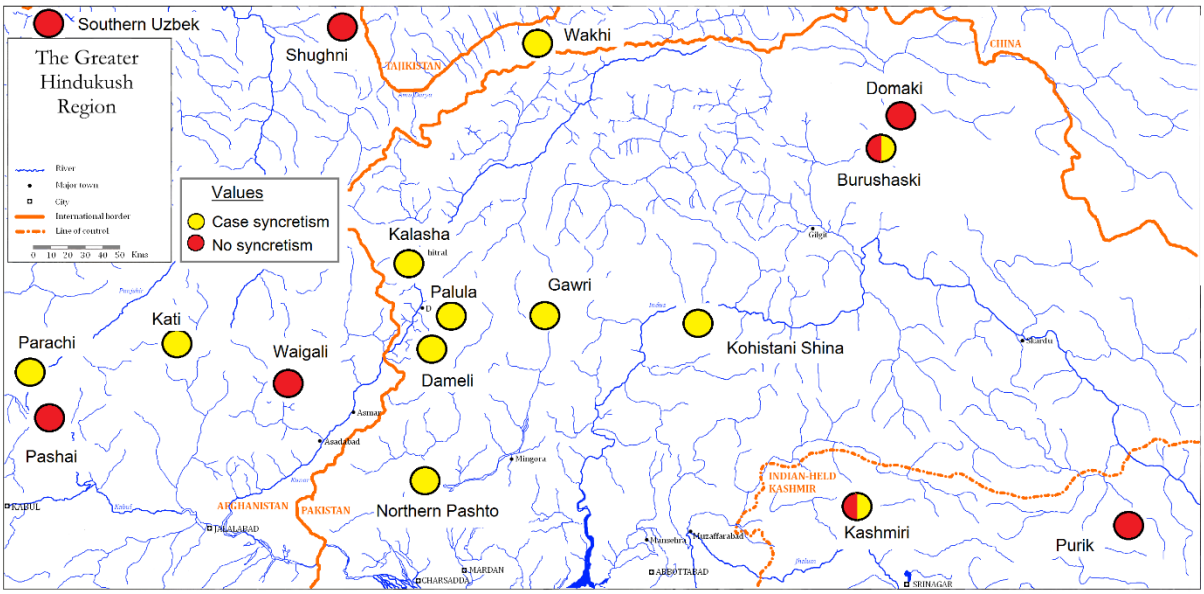
Map 3. *Number of cases in the sample languages*. Map from Liljegren with features added by the author

5.1.2 Means of case marking

Cases are marked predominantly with suffixes, apart from Gawri – where tone and suppletion are also used to mark case – and possibly a few nouns in Kalasha and Domaki, which show stem alternation and suppletive forms in addition.

5.1.3 Case syncretism

As already mentioned above, case syncretism is a common phenomenon in the sample languages, so it should not surprise us to find many instance case syncretism in the sample: only six out of 17 languages do not show case syncretism, i.e. 65% show some kind of syncretism. Compared to the 53% of the WALS sample, this figure is only slightly, and probably insignificantly, higher.



Map 4. *Case syncretism in the sample*. Map from Liljegren with features added by the author

Basically all languages with syncretism show syncretism in the core system. A typical pattern for this syncretism is the following:

	SG	PL	
Direct	-X	-Y	
Oblique	-Y	-Y	-X

Table 61: Typical pattern of core syncretism in the sample.

The direct singular stands somewhat in opposition to the direct plural and the oblique forms. Another instance of core syncretism which often occurs is between the direct singular and the oblique singular, eliminating a formal distinction of these cases.

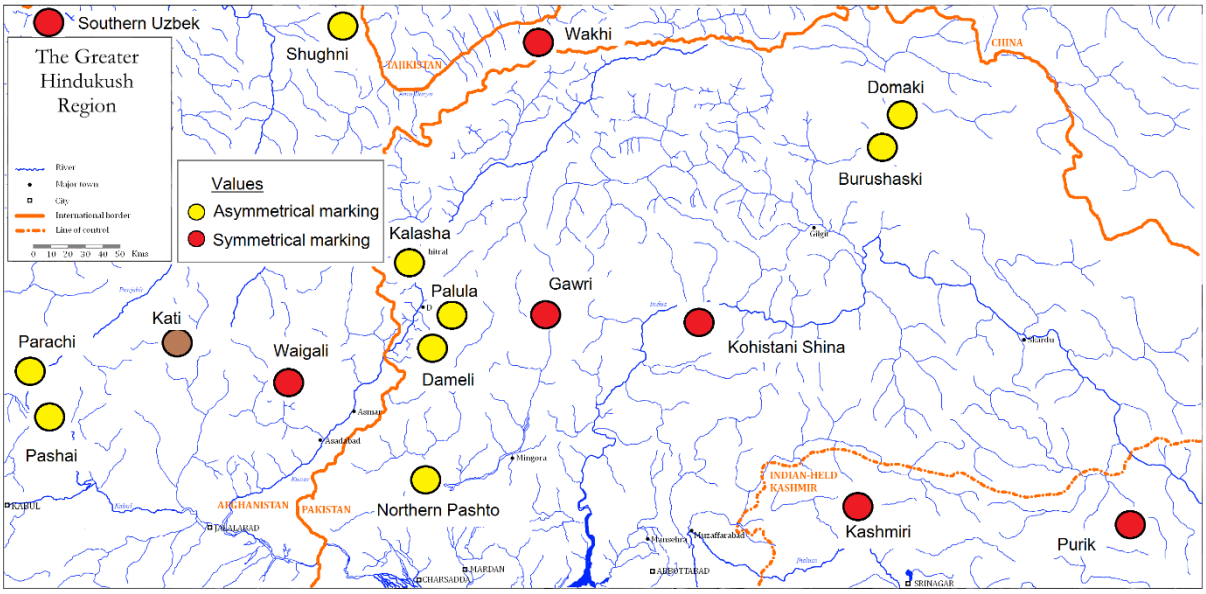
There are two odd cases in this sample: Kashmiri and Burushaski (represented by the split dots). Kashmiri shows, according to Koul (2003), only case syncretism in the peripheral case paradigm, and so does Burushaski. Such a case is not reported in Baerman & Brown's sample, and might require further investigation.

The alternative analysis of Kashmiri, in agreement with Koul (2006), would solve this problem partly: the paradigm would have case syncretism between the core and non-core cases (as in Dameli), but we could argue for different cases nonetheless, as the respective cases differ highly in their use (cf. the Dameli ergative and instrumental).

The problem in Burushaski on the other hand is not easily explained. The language might thus be typologically divergent in this respect.

5.1.4 Asymmetrical case marking

About half of the sample languages (53%) have a symmetrical case marking system, which is quite close to the 45% of the WALS sample. (Data for Kati was too insufficient on this point to make a statement about the marking.)



Map 5. *Asymmetrical case marking in the sample*. Map from Liljegren with features added by the author

5.2 Alignment systems in the sample

I will now turn to the different alignment patterns found in the sample. There is a trend towards split ergative systems with a split based on tense-aspect, a system which shows a clear, significant areal-typological distribution.

As my aim was to investigate the alignment systems of nouns in the sample, it is important to be aware that this might be a limitation for the overall alignment in the respective language. The alignment patterns which I present here are valid for noun inflection only, and presumably do not always remain valid for other parts of speech such as pronouns or verb alignment (the alignment of pronouns often presents a different, more complicated picture; for instance, Domaki and Burushaski alignments are classified as quite consistent ergative systems if you only take nouns into account, but we find a more complex split system when taking into account the pronouns as well. Another example is Pashai, which shows double oblique marking in the past when also taking pronouns into account.)

With respect to the basic distinctions between an "accusative, ergative or split system", the distribution of the sample is as follows: most languages employ a split system, some have an accusative alignment and some have an ergative system. Note that Wakhi is represented twice, as the language has different dialects with different alignment systems.

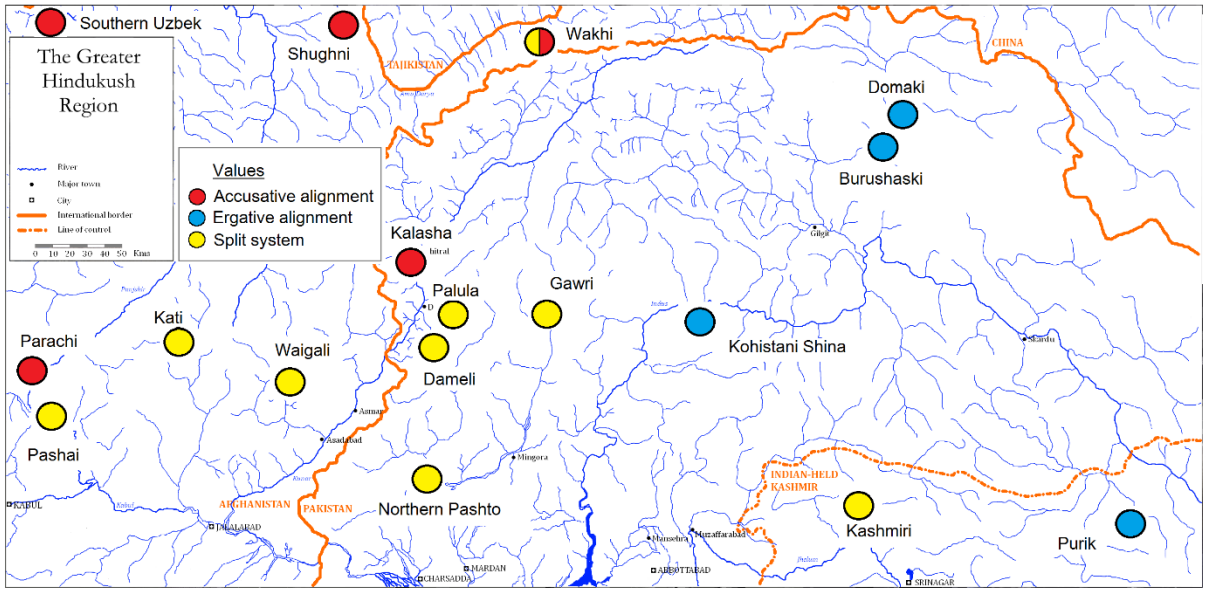
Accusative	Ergative	Split
Kalasha (HKIA)	Kohistani Shina (HKIA)	Gawri (HKIA)
Shughni (Iranian)	Domaki (Central IA)	Dameli (HKIA)
Wakhi (1) (Iranian)	Purik (Tibeto-Burman)	Palula (HKIA)
Uzbek (Turkic)	Burushaski (Isolate)	Kashmiri (HKIA)
Parachi (Iranian)		Pashai (HKIA)
		Wakhi (2) (Iranian)
		Pashto (Iranian)
		Kati (Nuristani)
		Waigali (Nuristani)
28 %	22%	50%

Table 62: Alignment systems and their frequency in the sample.

A comparison with Comrie's study (2013a) (presented under 2.1.2) can only partly be carried out, as the categories he uses are much more specific than the three I used in this study. Nonetheless, some comparisons can be drawn between the numbers presented in Comrie's study and my own results: ergative and accusative (with an unmarked nominative) systems occur with comparable frequency (22% vs. 17%, and 28% vs. 24%). Tripartite systems are very rare with only 2% in Comrie's study; the present survey includes some instances of alignment systems with partly tripartite patterns. In the present sample, a number of neutral alignments are also found, the most predominant type 52% of the time in Comrie's study. These "sub-patterns" however, usually do not dominate in the systems, and are insufficient to describe the alignment as a whole.

5.2.1 The geographical distribution

As already explained, the systems in the present sample are categorized as accusative, ergative and split for the purpose of this study. When we look at the geographical distribution of the sample languages with respect to these values, we find the following patterns (Wakhi has dialects with different alignment systems, therefore the split dot):



Map 6. *Alignment systems in the sample*. Map from Liljeren with features added by the author

With these findings, one can clearly make out a geographical correlation between the different alignment systems. The results show a clear cluster of languages with split systems in the south-

western region of the Greater Hindukush. The languages with an ergative system are distributed in the (north-) eastern part and are all adjacent. Accusative systems are mainly found in the north(-western) parts of the region, which also contains the Turkic languages.

A similar pattern is presented by Liljegren. He defines a "north western agenthood" (2014:162) (similar to the ergative systems in my sample), and distinguishes the split systems found in the western/south-western Greater Hindukush further, mentioning a "western patienthood" (2014:163), which developed the "overt case marking of the P argument" and a "southern P-agreement" (2014:166).

As far as the same languages are considered in Liljegren (2014) and in the present study, the results can be said to be in agreement (Liljegren 2014:159ff.). As the present study investigated a number of non-HKIA languages of the GHK, Liljegren's findings were extended geographically (that is, at least as far as the alignment of the noun system is concerned).

The alignment systems in the individual languages contrast as follows to the typical alignment in their respective language family:

The typical alignment for Indo-Aryan languages is a split system with a split in tense-aspect. Five of eight HKIA languages in the sample show a split system (Gawri, Dameli, Palula, Kashmiri, and Pashai). Kohistani Shina (HKIA) and Domaki (Central IA) have a more consistent ergative alignment of nouns. Domaki is surrounded by the ergative language Burushaski. Even Kohistani Shina is geographically closer to these languages than other HKIA languages in the sample. (See even Liljegren's results for Kohistani Shina; 2014:146). Kalasha (HKIA) has an accusative alignment, and is therefore atypical for the modern HKIA languages. However, Old Indo-Aryan case alignment was accusative (Masica 230f.). This means that most of the other HKIA languages have undergone a change in alignment from a more accusative system towards split ergativity, and, in fact, Kalasha has kept the original system (cf. also Liljegren's results in 2014:145).

For Iranian languages, split ergativity was the expected value. Only Pashto can fully correspond this view. Wakhi shows variation in the dialects, some with an accusative alignment and some with a more ergative alignment. Shughni proved to have an accusative alignment. Both of the latter languages are geographically closest to the Turkic languages of the sample, which have an accusative alignment. The fourth Iranian language in the sample, Parachi, is usually said to be an

ergative language; however, the noun alignment seems to be more accusative. As the eastern Iranian Pamir languages are undergoing a change towards a more accusative system (Payne 1979:148), we might consider this change to be affecting Parachi also.

For Nuristani, as explained above, split ergativity is assumed to be the typical alignment. Both languages in the sample confirmed this view. The data for Kati was not entirely convincing on that point, however, and suggested an alternative alignment which was more accusative in parts of the system.

Tibeto-Burman languages are well-known to be ergative. The sample language made no exception on this point.

The Turkic languages are nominative-accusative, which Uzbek confirmed, presenting a typical typological typical case system of a Turkic language.

Burushaski is classified in most of the literature as an ergative language (some descriptions were more specific and mentioned a split system). The Burushaski noun system was shown to be ergative.

5.2.2 The split systems

I have already mentioned that the term "split system" does not do justice to the complexity of such systems. In this section, I will take a closer look at the split systems in the sample and the different alignments they include. These might present evidence for yet another possible sub-areal feature.[3]

The split systems in the sample are mainly based on a distinction between imperfective and perfective tense-aspect. Masica writes that Indo-Aryan languages often have a "quasi-ergative case

[3] In three languages (Pashai, Pashto and Parachi), it can be argued that there is a double oblique/ AP-S alignment (although not of nouns, but of pronouns!). This would be true if we consider the marking of pronouns (in Pashai and Parachi), and objects marked with adpositions (Pashto). According to Liljegren (p.c.), when considering pronouns, Dameli show instances of double oblique alignment. As it is a very rare phenomenon typologically, and as the languages showing this pattern occur in the same geographical region, there could be reasons to believe that this might be a sub-areal typological phenomenon. This is strictly speaking not part of my investigation, as I decided to exclude pronouns, but it would be interesting to investigate this feature closer in further research.

marking and agreement patterns in the Perfective only, vs. nominative-accusative patterns in non-Perfective tenses" (1991:342–343). The sample languages confirmed this statement: this is the predominant alignment pattern in the sample languages. The alignment is visualized in the following table, which generalizes the zero-marked case as nominative and the agent-marking as ergative:

	S	A	P
Imperfective	NOM	NOM	NOM
Perfective	NOM	ERG	NOM

Table 63: Typical split alignment pattern of the sample languages.

The marking of P, however, varies in the sample languages, which results in various alignment systems: In most languages, P is marked with the nominative/direct case, or with the oblique. This results in a partly neutral and partly tripartite marking of S, A and P. Several languages show neutral alignment in the imperfective and/or in present tenses. The neutral alignment can either apply partly in the noun system (for instance in Waigali) or entirely (for instance in Dameli or Palula). In these cases, the split is rather between an ergative and a neutral pattern.

Several HKIA-languages showed syncretism between the oblique/ergative/agentive case and the instrumental case (for instance Kalasha, Dameli and Palula), which provides a hint about the origin of the ergative case in the instrumental.

5.3 Further research

The available grammatical descriptions for the sample languages differed quite considerably. As a result, some languages could be treated more thoroughly, as there were more data to be discussed from which we could draw more conclusions (for example Kohistani Shina), whereas other languages of the sample were treated much more briefly (Kati for instance). I want to point out that the range of results differs due to this fact. Here, obviously, more research on the languages themselves would contribute in many ways.

One major issue in the sample languages is the function and form of the case markers, i.e. affixes and adpositions. In order to describe the case systems in the sample languages, one would have to investigate these, and define which markers are to be considered case markers and which are merely adpositions marking a certain grammatical relation. Without this, a description of the case inventory is not very grounded and of limited value in a typological perspective.

In order to gain more knowledge about the areal-typological features observed, and a possible direction of (contact-induced) change, a diachronic perspective on the matter would be useful. Historical facts have been touched upon in this thesis, but a more detailed investigation would be valuable.

This thesis' obvious limitation is that only the alignment systems of full noun phrases are considered. However, this fact does not impair the results in general, and it does not affect the findings of areal patterns of alignment. However, a thorough investigation of the alignment patterns in more categories than just noun phrases seems necessary for an in-depth study of alignment in the Greater Hindukush region, and would certainly prove to be interesting from a typological point of view as well.

Another topic of inquiry that could be of profit is a deeper investigation of the case alignment systems presented in this study. In many of the sample languages, the extent to which the system can be described as a two-term or bicasual system could be elaborated upon (see Arkadiev 2008).

6. Conclusion

A language's grammatical alignment system, and, for that matter, also its case system, is a complex and varied structure, and cannot be described by investigating noun alignment only. Different categories can show different alignments. However, even though I focused exclusively on the alignment of noun phrases, the picture was hardly simple, as most languages showed a lot of variation within their case alignment systems.

Standard classifications of alignment into accusative and ergative systems are clearly too imprecise. The attested systems included several typologically marked patterns, proving such a classification over-simplifying the situation. It might be better to speak of a degree of ergativity or accusativity instead, and/or include the different attested alignment patterns.

The survey of the general properties of case mostly revealed expected values, but the pattern of core case syncretism has proven to be important and would be a good starting point for further investigation. Claims about case inventory size were rather problematic due to differing analyses in the literature.

This thesis shows that there are areal patterns for the different alignment systems in the Greater Hindukush. Accusative alignments were attested in the north-western part of the region, including and adjacent to the accusatively aligned Turkic languages. The languages in the eastern part proved to be more ergative, and are close to both the Tibeto-Burman languages and Burushaski, which are predominantly ergative languages. Split systems, mainly based on a tense-aspect distinction, were found in the central and south-western parts of the Greater Hindukush, and the alignment systems included in these are worth a deeper investigation.

7. Refereces

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